XR-6559/C220

SERVICE MANUAL

AEP Model
XR-C220
UK Model
XR-6559/C220

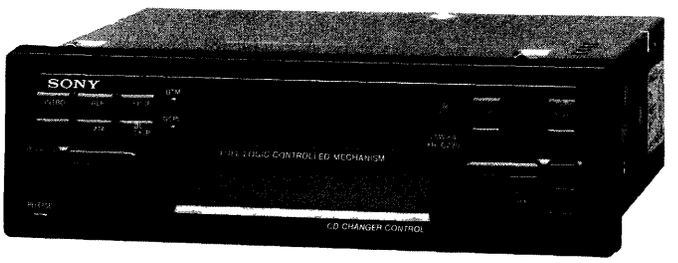

Photo : XR-C220

Model Name Using Similar Mechanism	XR-6759RDS/C300RDS
Tape Transport Mechanism Type	MG-50EX2-39

SPECIFICATIONS

Cassette player section

Tape track	4-track 2-channel stereo
Wow and flutter	0.08 % (WRMS)
Frequency response	30 – 18,000 Hz
Signal-to-noise ratio	58 dB

Tuner section

FM

Tuning range	87.5 – 108.0 MHz
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz
Usable sensitivity	8 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	65 dB (stereo), 68 dB (mono)
Harmonic distortion at 1 kHz	0.5 % (stereo), 0.3 % (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz
Capture ratio	2 dB

MW/LW

Tuning range	MW: 531 – 1,602 kHz LW: 153 – 281 kHz
Antenna terminal	External antenna connector
Intermediate frequency	10.71 MHz/450 kHz
Sensitivity	MW: 30 µV LW: 50 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	25 W × 4 (at 4 ohms)

General

Outputs	Line out (1) (XR-C220) Power amplifier control lead
Tone controls	Bass ±8 dB at 100 Hz Treble ±8 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 188 × 58 × 177 mm (w/h/d)
Mounting dimension	Approx. 182 × 53 × 155 mm (w/h/d)
Mass	Approx. 1.2 kg
Supplied accessories	Parts for installation and connections (1 set) Front panel case (1)

Design and specifications are subject to change without notice.

FM/MW/LW CASSETTE CAR STEREO

SONY®

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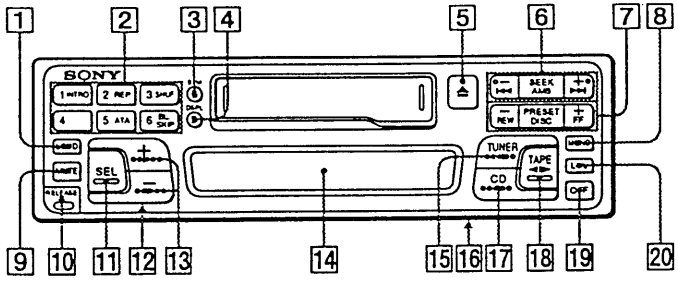
Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacito may be damaged by heat.

Location of controls



Refer to the pages for further details.

1 LOUD (loudness) button 8

2 During radio reception:
Preset number buttons 7

During tape/CD playback:
① INTRO button 6, 9
② REPEAT button 6, 9
③ SHUF button 9
⑤ ATA (Automatic Tuner Activation) button 6
⑥ BL.SKIP button 6

3 BTM (Best tuning memory function) button 7

4 DSPL (display mode change/time set) button 5, 6, 7, 8

5 ⏏ (eject) button 5

6 SEEK/AMS button 6, 7, 8

7 PRESET/DISC button 5, 6, 7, 8

8 MONO button 7

9 MUTE button 8

10 RELEASE (front panel release) button 4, 10

11 SEL (control mode select) button 5, 8

12 Reset button (located on the front side of the unit hidden by the front panel)
Press this button when you use this unit for the first time, when you have changed the car battery, or when the buttons of this unit do not function properly.

13 ⊕⊖ (volume/bass/treble/balance/fader control) button 5, 8

14 Display window

15 TUNER (radio on/band select) button 7

16 POWER SELECT switch (located on the bottom of the unit)
See "POWER SELECT Switch" in the installation/Connections manual.

17 CD (disc play/CD changer select) button 8

18 TAPE/◄I► (playback/transport direction change) button 5

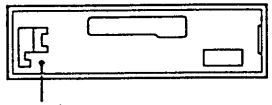
19 OFF button 4, 5

20 LCL (local seek adjust) button 7

Getting Started

Resetting the unit

Before operating the unit for the first time or after replacing the car battery, you must reset the unit.
Press the reset button with a pointed object, such as a ballpoint pen.



Reset button

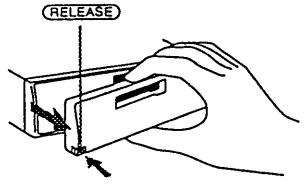
Note
Pressing the reset button will erase all the memorized stations.

Detaching the front panel

The front panel of this unit can be detached in order to prevent the unit from being stolen.

1 Press (OFF).

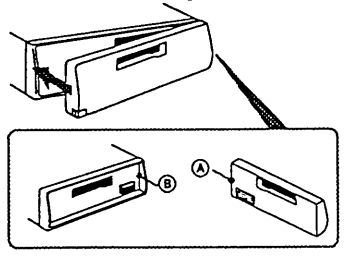
2 Press (RELEASE) to open up the front panel, and detach the panel by pulling it towards you.



Notes
- *Be sure not to drop the panel when detaching it from the unit.*
- *If you press (RELEASE) to detach the panel while the unit is still turned on, the power will be automatically turned off in order to protect the speakers from being damaged.*

Attaching the front panel

Attach part Ⓐ of the front panel to part Ⓑ of the unit as illustrated and push until it clicks.



Notes
- *Make sure that the front panel is the right way up when attaching it to the unit as it cannot be attached upside down.*
- *Do not press the front panel hard against the unit when attaching it to the unit. It can easily be attached by pressing it lightly against the unit.*
- *When you carry the front panel with you, put it in the supplied front panel case.*
- *Do not press hard or give excessive pressure to the display windows of the front panel.*
- *Do not expose the front panel to direct sunlight, heat sources such as hot air ducts or leave it in a humid place. Never leave it on the dashboard etc. of a car parked in direct sunlight where there may be a considerable rise in temperature inside the car.*

Caution alarm

If you turn the ignition key to the OFF position without removing the front panel, the caution alarm will beep for a few seconds (only when the POWER SELECT switch is set to the Ⓐ position).

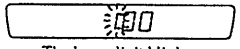
This section is extracted from XR-C220's instruction manual.

Setting the clock

For example, setting it to 10:08

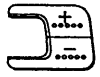
1 Press (OFF) or (DSPL) during operation.

2 Press (DSPL) for two seconds.



The hour digit blinks.

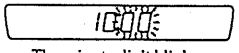
❶ Set the hour digits.



to go forward

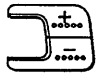
to go back

❷ Press (SEL) momentarily.



The minute digit blinks.

❸ Set the minute digits.



to go forward

to go back

3 Press (DSPL) momentarily.

The clock activates.

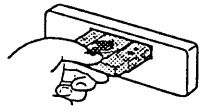
Note

If the POWER SELECT switch on the bottom of the unit is set to the ❸ position, the clock cannot be set unless the power is turned on. Set the clock after you have turned on the radio.

Cassette Player

Listening to the tape

Insert the cassette.



Playback will start automatically.

If the cassette is already inserted, press (TAPE) to start playback.

The side facing up is being played.

The side facing down is being played.

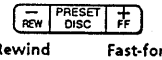
Tip

To change the tape transport direction, press (TAPE) during tape playback.

To	Press
Stop playback	(OFF)
Eject the cassette	⏏

Fast-winding the tape

During playback, press either side of (PRESET/DISC).



Rewind Fast-forward

To start playback during fast-forwarding or rewinding, press (TAPE).

Locating the beginning of the tracks — Automatic Music Sensor (AMS)

You can skip up to nine tracks at one time.

During playback, press either side of (SEEK/AMS) momentarily.

To locate the previous tracks

To locate the succeeding the tracks

Note

The AMS function may not work when :

- *the blanks between tracks are shorter than 4 seconds*
- *there are noises*
- *there are long sections of low volume or quiet sections.*

Changing the displayed items

Each time you press (DSPL) momentarily during tape playback, the displayed item changes as follows:

→ Tape playback → Clock → Frequency* →

**While the ATA function is activated.*

Playing the tape in various modes

Searching the desired track — Intro scan

Press ① during playback.
"INTRO" appears on the display.

The first 10 seconds of all the tracks are played.

When you find the desired track, press again. The unit returns to the normal playback mode.

Playing tracks repeatedly — Repeat play

Press ② during playback.
"REP" appears on the display.

When the currently played track is over, it will be played again from the beginning.

To cancel this mode, press again.

Switching to the radio during fast-winding the tape — Automatic Tuner Activation (ATA)

Press ⑤ during playback.
"ATA" appears on the display.

When fast-forwarding or rewinding with (PRESET/DISC), the tuner will turn on automatically.

Skipping blanks during tape playback — Blank skip

Press ⑥ during playback.
"BL.SKIP" appears on the display.

Blanks longer than eight seconds will be automatically skipped during tape playback.

Radio

Memorizing stations automatically

— Best Tuning Memory (BTM)

This function selects from the currently received band the stations with the strongest signals and memorizes them in order of their frequency.

PREVENTING ACCIDENTS!
When tuning in during driving, use the automatic tuning and the memory preset search function instead of the manual tuning.

1 Press (TUNER) repeatedly and select the band.
Each time you press (TUNER), the band changes as follows:
FM1 → FM2 → FM3 → MW → LW

2 Press (BTM) for two seconds.

Notes
- *The unit will not store stations with weak band frequencies on the preset number buttons. If there are only a few stations received, some preset number buttons will remain empty.*
- *When there is a preset number indicated on the display, the unit will store stations on all preset number buttons from the one currently displayed.*

Memorizing only the desired stations

Up to 6 stations on each band (FM1, FM2, FM3, MW and LW) can be stored on the preset number buttons in order of your choice. Therefore, 18 stations can be memorized on FM.
If you try to store another station on the same preset number button, the previously stored station will be erased.

1 Press (TUNER) repeatedly, and select the band.

2 Press (SEEK/AMS) to search for the station which you wish to store on the preset number button.

3 Press the desired preset number button (① to ⑥) for two seconds until a beep sounds.

The number of the pressed preset number button appears on the display.

Receiving the memorized stations

1 Press (TUNER) repeatedly, and select the band.

2 Press the preset number button (① to ⑥) momentarily on which the desired station is stored.

Tip
Press either side of (PRESET/DISC) momentarily to receive in order the stations stored in the memory (Preset Search Function).

If FM stereo reception is poor
— Monaural mode

Press (MONO) momentarily.
"MONO" appears on the display.
The sound will improve, but it will become monaural. (The "ST" indication will disappear.)

Changing the displayed items

Each time you press (DSPL), the display item changes as follows:
Frequency ⟷ Clock

If you cannot tune in a preset station

Press either side of (SEEK/AMS) momentarily to search for the station (automatic tuning).
The scanning stops when a station is received. Press either side of the button repeatedly until the desired station is received.

Note
If the automatic tuning stops too frequently, press (LCL) momentarily to display the "LCL" (local seek mode) indication. Only the stations with relatively strong signals can be tuned in.

Tip
If you know the frequency, press and hold either side of (SEEK/AMS) until the desired station is received (manual tuning).

Other Functions

Adjusting the sound characteristics

1 Select the item you want to adjust by pressing (SEL) repeatedly.
VOL (volume) → BAS (bass) → TRE (treble) → BAL (balance) → FAD (fader)

2 Adjust the selected item by pressing either (+) or (−).

Adjust within three seconds after selecting. (After three seconds the button will again serve as volume control button.)

Muting the sound

Press (MUTE).
The "MUTE" indication flashes.

To restore the previous volume level, press again.

Changing the sound and display settings

Enjoying bass and treble even at Low Volume — Loudness

Bass and treble will be reinforced.

Press (LOUD).
"LOUD" will appear on the display.

To cancel, press again.

Muting the beep tone

Press ⑥ while pressing (SEL).
To obtain the beep tone again, press these buttons once more.

With the Optional Equipment
CD Changer

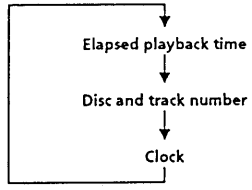
You can control two CD changers.

Playing a CD

Press (CD) and select the changer.
CD playback starts.

When a CD changer is connected, all the tracks play from the beginning.

Each time you press (DSPL) momentarily during CD playback, the displayed item changes as follows:



Locating a specific track
— Automatic Music Sensor (AMS)

During playback, press either side of (SEEK/AMS) the number of times you wish to skip the tracks.

To locate the previous tracks — To locate the succeeding tracks

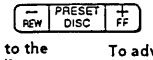
Locating a specific point in a track
— Manual Search

During playback, press and hold either side of (SEEK/AMS). Release the button when you have found the desired part.

To reverse — To forward

Switching to other discs

During playback, press either side of (PRESET/DISC).



To return to the previous disc — To advance to the next disc

Scanning the tracks

— Intro scan

The first 10 seconds of all the tracks on the currently selected disc are played in order. After the first disc is over, the next disc is played.

Press ① during playback.
"INTRO" appears on the display.

When you find the desired track, press again . The unit returns to the normal CD playback mode.

Playing tracks repeatedly

— Repeat play

To repeat a track

Press ② repeatedly during CD playback until "REP 1" is displayed.

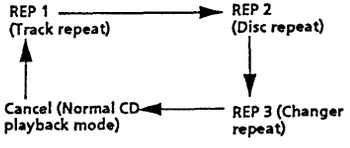
To repeat a disc

Press ② repeatedly during CD playback until "REP 2" is displayed.

To repeat all the discs in the current changers

Press ② repeatedly during CD playback until "REP 3" is displayed.

Each time you press ② the display changes as follows:



Playing tracks in random order — Shuffle play

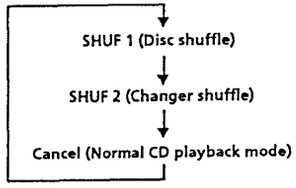
To play the tracks on the current disc in a random order

Press ③ repeatedly during CD playback until "SHUF 1" is displayed.

To play the tracks in the current changer in a random order

Press ③ repeatedly during CD playback until "SHUF 2" is displayed.

Each time you press ③ the display changes as follows:



If you press ① during shuffle play, the first 10 seconds of all tracks will be played in random order.

Connections

Caution

- This unit is designed for negative ground 12 V DC operation only.
- Connect the power connecting cord ⑤ to the unit and speakers before connecting it to the auxiliary power connector.
- Run all ground wires to a common ground point.

If Your Car has No Accessory Position on the Ignition Key Switch — POWER SELECT Switch

The illumination on the front panel is factory-set to be turned on even when the unit is not being played. However, this setting may cause some car battery wear if your car has no accessory position on the ignition key switch. To avoid this battery wear, set the POWER SELECT switch located on the bottom of the unit to the ⓑ position, then press the reset button. The illumination is reset to stay off while the unit is not being played.

Note

The caution alarm for the front panel is not activated when the POWER SELECT switch is set to the ⓞ position.

Reset Button

When the installation and connections are over, be sure to press the reset button with a ballpoint pen etc.

Note on the control leads

The power antenna control lead (blue) supplies + 12 V DC when you turn on the tuner or when you activate the ATA (Automatic Tuner Activation) function.

Memory hold connection

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

Notes on speaker connection

- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.*
- *Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.*

Warning

If you have a power antenna without a relay box, connecting this unit with the supplied power connecting cord ⑤ may damage the aerial.

Conexiones

Precauciones

- Esta unidad ha sido diseñada para alimentarse con 12 V CC, negativo a masa, solamente.
- Conecte el cable de conexión de alimentación ⑤ a la unidad y a los altavoces antes de conectarlo al conector de alimnentación auxiliar.
- Conecte todos los conductores de puesta a masa a un punto común.

Si el automóvil no dispone de posición para accesorios en la llave de encendido — Selector POWER SELECT

La iluminación del panel frontal ha sido ajustada en fábrica para que esté activada aunque la unidad no se encuentre en reproducción. Sin embargo, este ajuste puede provocar cierta descarga de la batería del automóvil si éste no dispone de posición para accesorios en la llave de encendido. Para evitar esto, ponga el selector POWER SELECT, situado en la base de la unidad, en la posición ⓑ y, después, presione el botón de reposición. La iluminación estará desactivada cuando la unidad no se encuentre en reproducción.

Nota

La alarma de precaución del panel frontal no se activará cuando el selector POWER SELECT se encuentre en la posición ⓑ.

Botón de reposición

Cuando finalice la instalación y las conexiones, cerciórese de presionar el botón de reposición con un bolígrafo, etc.

Nota sobre conductores de control

El conductor de control de la antena motorizada (azul) suministrará +12 V CC cuando conecte la alimentación del sintonizador o cuando active la función de activación automática del sintonizador (ATA).

Conexión para protección de la memoria

Si conecta el conductor de entrada amarillo, el circuito de la memoria recibirá siempre alimentación, incluso aunque ponga la llave de encendido en la posición OFF.

Notas sobre la conexión de los altavoces

- *Antes de conectar los altavoces, desconecte la alimentación de la unidad.*
- *Utilice altavoces con una impedancia de 4 a 8 ohmios, y con la potencia máxima admisible adecuada, ya que de lo contrario podría dañarlos.*
- *No conecte los terminales del sistema de altavoces al chasis del automóvil, ni los del altavoz izquierdo a los del derecho.*
- *No intente conectar los altavoces en paralelo.*
- *No conecte altavoces activos (con amplificadores incorporados) a los terminales de altavoces de la unidad. Si lo hiciese, podría dañar tales altavoces. Por lo tanto, cerciórese de conectar altavoces pasivos a estos terminales.*

Advertencia

Si dispone de una antena motorizada sin dispositivo de relé, la conexión de esta unidad con el cable de conexión de alimentación ⑤ suministrado puede dañar la antena.

Anslutning

Sökerhetsföreskrifter

- Denna bilstereo är endast avsedd för anslutning till ett negativt jordat, 12 V bilbatteri.
- Anslut strömkabeln ⑤ till enheten och högtalarna innan du ansluter den till den yttre strömanslutning.
- Dra samtliga jordledningar till en och samma jordningspunkt.

Montera bilstereon i en bil vars tändlås inte har något strömläge — Omkopplaren POWER SELECT

Innan bilstereon levererades från fabriken ställdes belysningen i teckenfönstret in så att den lyser också när bilstereon inte används. Detta kan emellertid orsaka urladdning av batteriet när du använder bilstereon i en bil, vars tändlås saknar läget ACC (strömläge). Skjut omkopplaren POWER SELECT på bilstereons undersida till läge ⓑ, och tryck sedan på återställningsknappen för att undvika att bilbatteriet laddas ur. Nu lyser inte längre belysningen i teckenfönstret när bilstereon inte används.

Obsevera

Varningssignalen, som varnar om du inte har tagit loss frontpanelen, ljuder inte när omkopplaren POWER SELECT står i läge ⓑ.

Nollställningsknappen

Kom ihåg att använda en penna eller något annat spetsigt föremål för att trycka på nollställningsknappen när anslutningen och monteringen är klar.

Att observera angående de olika styrkablarna

Motorantennens styrkabel (blå) leder +12 volts likström när bilradion slås på eller när radiomottagningsautomatiken ATA automatiskt slår på bilradion.

Anslutning för minnesstöd

När du anslutit den gula, ingående strömkabeln försörjs minneskretsen med ström hela tiden, även när tändlåset slås ifrån.

Att observera angående högtalarnas anslutning

- *Slå av bilstereon innan du ansluter högtalarna.*
- *Anslut endast högtalare, vars impedans varierar från 4 till 8 ohm och som har tillräcklig effekthanteringskapacitet för att skydda högtalarna mot skador.*
- *Anslut inte något av högtalarutlagen till bilens chassi. Anslut inte heller utlagen på höger högtalare till utlagen på vänster högtalare.*
- *Anslut inte högtalarna parallellt.*
- *Anslut inte aktiva högtalare (med inbyggda slutsteg) till bilstereons högtalarutlag, eftersom de kan skada de aktiva högtalarna. Var noga med att bara ansluta passiva högtalare till dessa utlag.*

Varning

Om du har en motorantenn utan reläddosa kan antennen skadas om du ansluter enheten med den medföljande strömkabeln ⑤.

Connexions

Advertência

- Este aparelho foi projectado para funcionar somente com corrente contínua de 12 V com massa negativa.
- Ligue o cabo de alimentação de corrente ⑤ ao aparelho e aos alifalantes antes de o ligar ao conector de corrente auxiliar.
- Ligue todos os fios de terra num ponto de massa comum.

Se o seu automóvel não estiver equipado com uma chave de ignição com posição acessórios — Interruptor POWER SELECT

A iluminação do painel frontal é regulada na fábrica para se manter acesa, mesmo quando o aparelho não estiver ligado. No entanto, esta regulação pode provocar a descarga da bateria se o aparelho for utilizado em automóveis sem chave de ignição com posição acessórios. Para evitar a descarga da bateria, regule o interruptor POWER SELECT, situado na base do aparelho, para a posição ⓑ. Em seguida, carregue no botão de reinicialização. A iluminação é regulada para ficar apagada enquanto o aparelho estiver desligado.

Nota

O alarme de advertência do painel frontal não é activado quando o interruptor POWER SELECT estiver regulado para a posição ⓑ.

Botão de reinicialização

Quando terminar a instalação e as ligações, não se esqueça de carregar no botão de reinicialização com a ponta de uma caneta, etc.

Ligação para alimentação contínua da memória

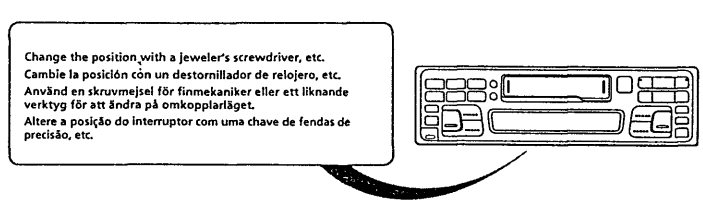
Quando, o fio amarelo de entrada de alimentação for ligado, os circuitos de memória ficarão com alimentação contínua, mesmo se a chave de ignição estiver desligada.

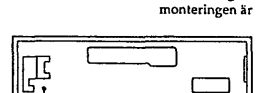
Notas sobre a ligação dos altifalantes

- *Antes de ligar os altifalantes, desligue o aparelho.*
- *Utilize altifalantes com impedância de 4 a 8 ohm, e com capacidade admissível de potência adequada. Caso contrário, os altifalantes poderão sofrer avarias.*
- *Não ligue os terminais do sistema de altifalantes ao chassis do automóvel, e não ligue os terminais do altifalante direito aos terminais do altifalante esquerdo.*
- *Não tente ligar os altifalantes em paralelo.*
- *Não ligue nenhum sistema de altifalantes activos (com amplificadores incorporados) aos terminais dos altifalantes do aparelho. Caso o faça, poderá avariar o sistema de altifalantes activos. Portanto, não se esqueça de ligar altifalantes passivos a estes terminais.*

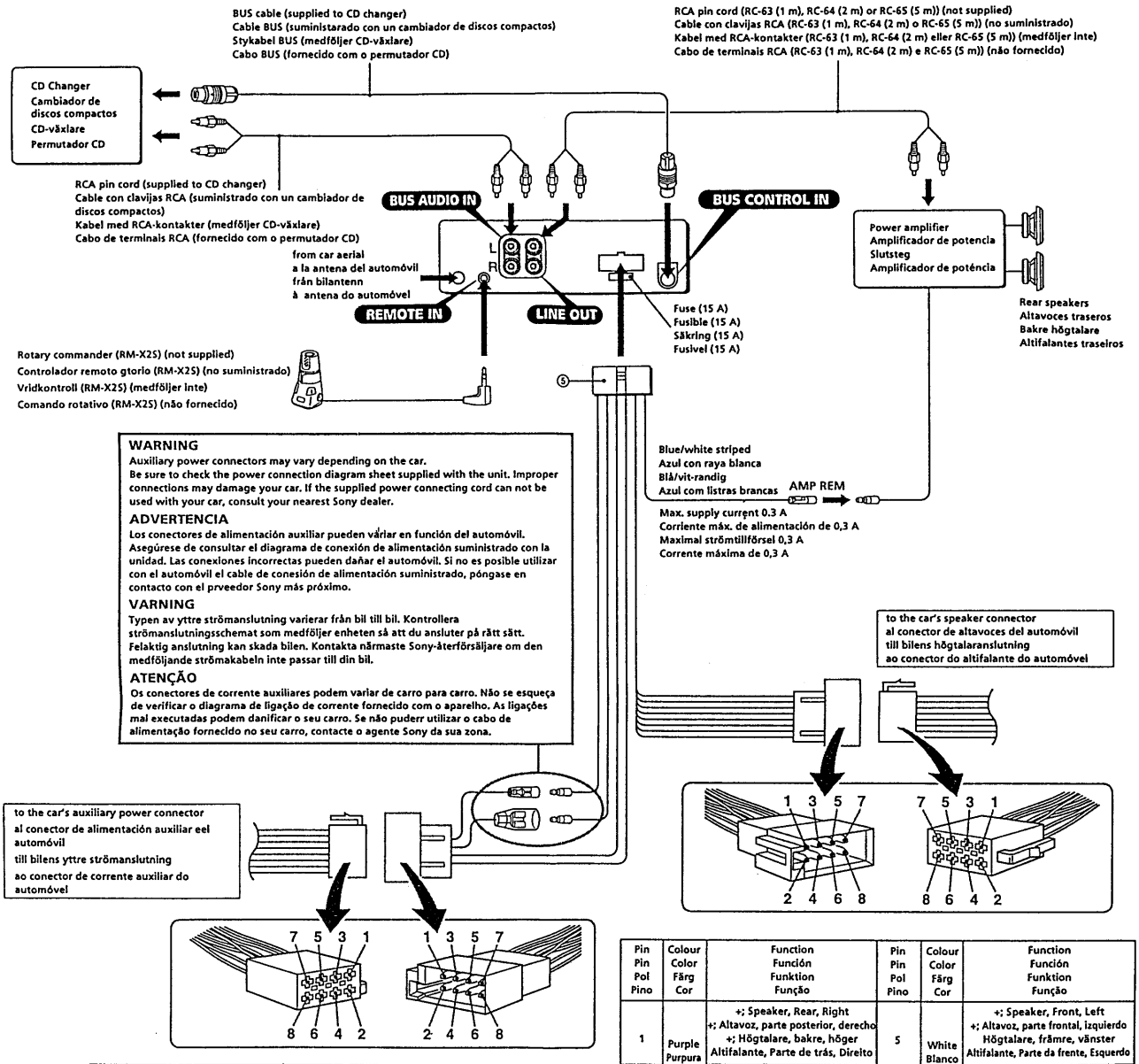
Atenção

Se a antena eléctrica não tiver uma caixa de relé, o facto de ligar este aparelho com o cabo de alimentação ⑤ fornecido, pode provocar danos na antena.


Change the position with a jeweler's screwdriver, etc.
Cambie la posición con un destornillador de relojero, etc.
Använd en skruvmejsel för finmekaniker eller ett liknande verktyg för att ändra på omkopplarläget.
Altere a posição do interruptor com uma chave de fendas de precisão, etc.



Connections of Example — Ejemplo de conexiones — Anslutningarna enligt exemplet — Exemplo de ligações


BUS cable (supplied to CD changer)
Cable BUS (suministarado con un cambiador de discos compactos)
Stykabel BUS (medföljer CD-växlare)
Cabo BUS (fornecido com o permutador CD)
RCA pin cord (RC-63 (1 m), RC-64 (2 m) or RC-65 (5 m)) (not supplied)
Cable con clavijas RCA (RC-63 (1 m), RC-64 (2 m) o RC-65 (5 m)) (no suministrado)
Kabel med RCA-kontakter (RC-63 (1 m), RC-64 (2 m) eller RC-65 (5 m)) (medföljer inte)
Cabo de terminais RCA (RC-63 (1 m), RC-64 (2 m) e RC-65 (5 m)) (não fornecido)
CD Changer
Cambiador de discos compactos
CD-växlare
Permutador CD
RCA pin cord (supplied to CD changer)
Cable con clavijas RCA (suministrado con un cambiador de discos compactos)
Kabel med RCA-kontakter (medföljer CD-växlare)
Cabo de terminais RCA (fornecido com o permutador CD)
BUS AUDIO IN
BUS CONTROL IN
from car aerial
a la antena del automóvil
från bilantenn
à antena do automóvel
REMOTE IN
LINE OUT
Fuse (15 A)
Fusible (15 A)
Säkring (15 A)
Fusível (15 A)
Power amplifier
Amplificador de potencia
Slutsteg
Amplificador de poténcia
Rear speakers
Altavoces traseros
Bakre högtalare
Altifalantes traseiros
Rotary commander (RM-X2S) (not supplied)
Controlador remoto gtorio (RM-X2S) (no suministrado)
Vridkontroll (RM-X2S) (medföljer inte)
Comando rotativo (RM-X2S) (não fornecido)
Blue/white striped
Azul con raya blanca
Blå/vit-randig
Azul com listras brancas
AMP REM
Max. supply current 0.3 A
Corriente máx. de alimentación de 0,3 A
Maximal strömtillförsel 0,3 A
Corrente máxima de 0,3 A
to the car's speaker connector
al conector de altavoces del automóvil
till bilens högtalaranslutning
ao conector do altifalante do automóvel
to the car's auxiliary power connector
al conector de alimentación auxiliar eel automóvil
till bilens yttre strömanslutning
ao conector de corrente auxiliar do automóvel
1 3 5 7
2 4 6 8
7 5 3 1
8 6 4 2

WARNING
Auxiliary power connectors may vary depending on the car.
Be sure to check the power connection diagram sheet supplied with the unit. Improper connections may damage your car. If the supplied power connecting cord can not be used with your car, consult your nearest Sony dealer.

ADVERTENCIA
Los conectores de alimentación auxiliar pueden vàrlar en función del automóvil. Asegúrese de consultar el diagrama de conexión de alimentación suministrado con la unidad. Las conexiones incorrectas pueden dañar el automóvil. Si no es posible utilizar con el automóvil el cable de conesión de alimentación suministrado, póngase en contacto con el prveedor Sony más próximo.

VARNING
Typen av yttre strömanslutning varierar från bil till bil. Kontrollera strömanslutningsschemat som medföljer enheten så att du ansluter på rätt sätt. Felaktig anslutning kan skada bilen. Kontakta närmaste Sony-återförsäljare om den medföljande strömkabeln inte passar till din bil.

ATENÇÃO
Os conectores de corrente auxiliares podem variar de carro para carro. Não se esqueça de verificar o diagrama de ligação de corrente fornecido com o aparelho. As ligações mal executadas podem danificar o seu carro. Se não puderr utilizar o cabo de alimentação fornecido no seu carro, contacte o agente Sony da sua zona.

Pin Pin Pol Pino	Colour Color Färg Cor	Function Función Funktion Função	Pin Pin Pol Pino	Colour Color Färg Cor	Function Función Funktion Função
4	Yellow Amarillo Gul Amarelo	continuous power supply suministro de alimentación continua kontinuerlig strömförsörjning alimentação ininterrupta de corrente	7	Red Rojo Röd Vermelho	switched power supply suministro de alimentación switchad strömförsörjning fornecimento comutado de corrente
5	Blue Azul Blå Azul	power aerial control antena eléctrica elektrisk seriell antena eléctrica	8	Black Negro Svart Preto	ground toma de tierra jord Terra

Positions 1, 2, 3 and 6 do not have pins.
Las posiciones 1, 2, 3 y 6 no disponen de pines.
Positionerna 1, 2, 3 och 6 saknar stift.
As posições 1, 2, 3 e 6 não têm pinos.

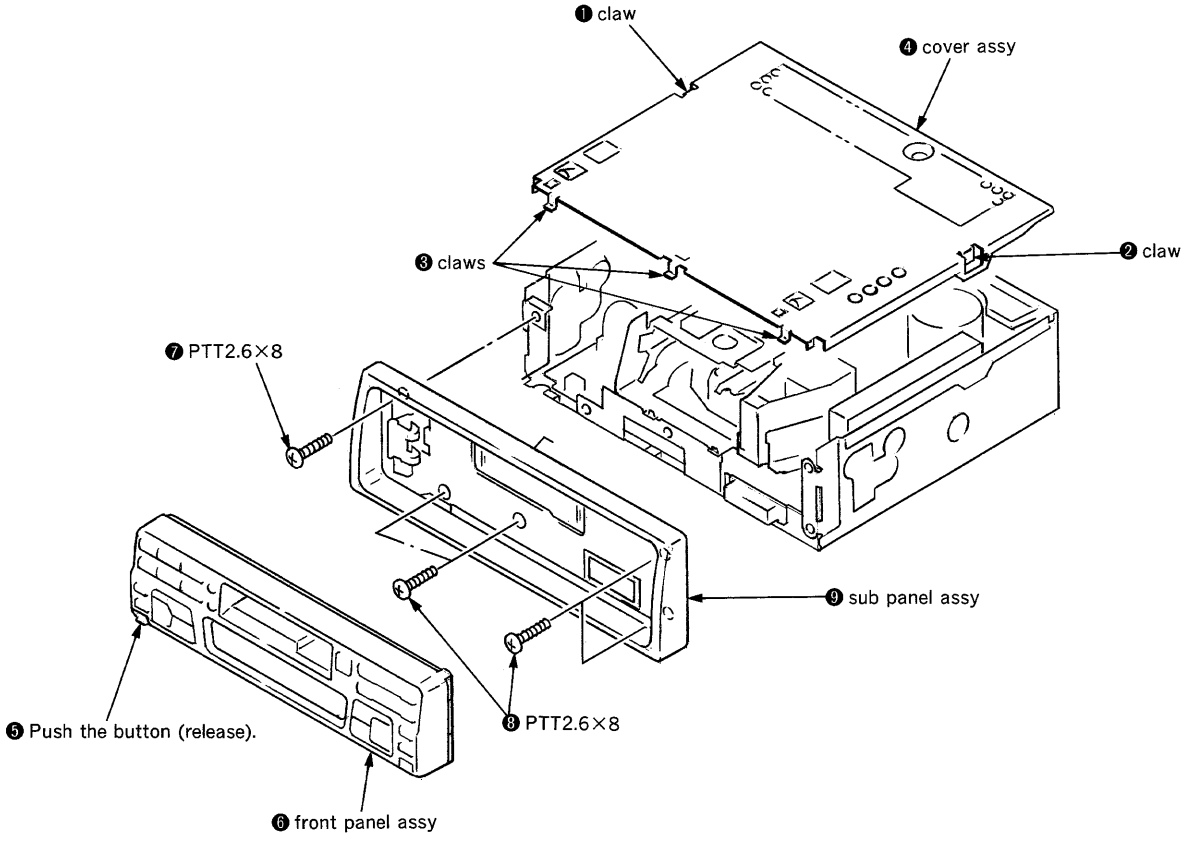
Pin Pin Pol Pino	Colour Color Färg Cor	Function Función Funktion Função	Pin Pin Pol Pino	Colour Color Färg Cor	Function Función Funktion Função
1	Purple Purpura	+; Speaker, Rear, Right +; Altavoz, parte posterior, derecho +; Högtalare, bakre, höger Altifalante, Parte de trás, Direito	5	White Blanco Vit Branco	+; Speaker, Front, Left +; Altavoz, parte frontal, izquierdo Högtalare, främre, vänster Altifalante, Parte da frente, Esquerdo
2	Morklila Violeta	–; Speaker, Rear, Right –; Altavoz, parte posterior, derecho Högtalare, bakre, höger Altifalante, Parte de trás, Direito	6		–; Speaker, Front, Left –; Altavoz, parte frontal, izquierdo Högtalare, främre, vänster Altifalante, Parte da frente, Esquerdo
3	Grey Gris Grå Cinza	+; Speaker, Front, Right +; Altavoz, parte frontal, derecho Högtalare, främre, höger Altifalante, Parte da frente, Direito	7	Green Verde Grön Verde	+; Speaker, Rear, Left +; Altavoz, parte posterior, izquierdo Högtalare, bakre, vänster Altifalante, Parte de trás, Esquerdo
4		–; Speaker, Front, Right –; Altavoz, parte frontal, derecho Högtalare, främre, höger Altifalante, Parte da frente, Direito	8		–; Speaker, Rear, Left –; Altavoz, parte posterior, izquierdo Högtalare, bakre, vänster Altifalante, Parte de trás, Esquerdo

Negative polarity positions 2, 4, 6, and 8 have striped cords.
Las posiciones de polaridad negativa 2, 4, 6 y 8 tienen cables con raya.
De negativa polpositionerna 2, 4, 6 och 8 har randiga kablar.
As posições 2, 4, 6 e 8 (polaridade negativa) têm cabos às riscas.

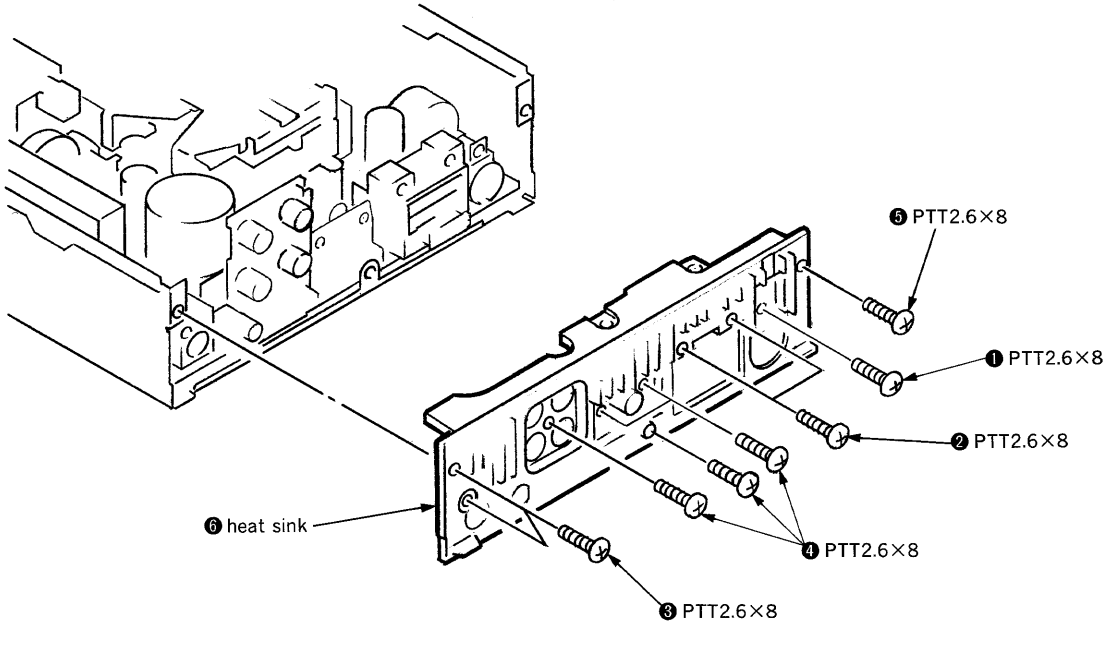
SECTION 2
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

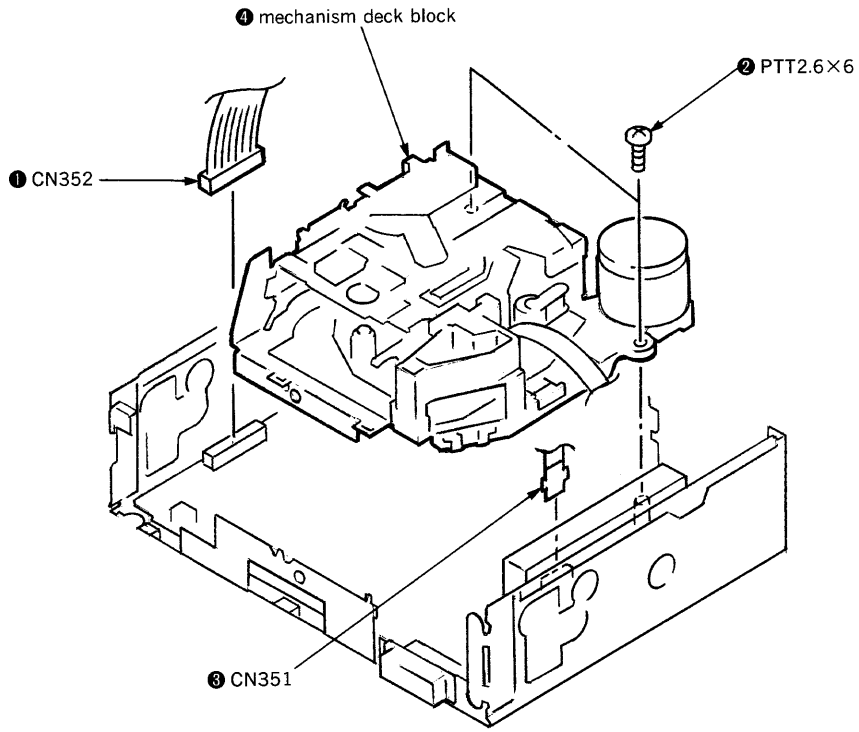
2-1. SUB PANEL ASSY



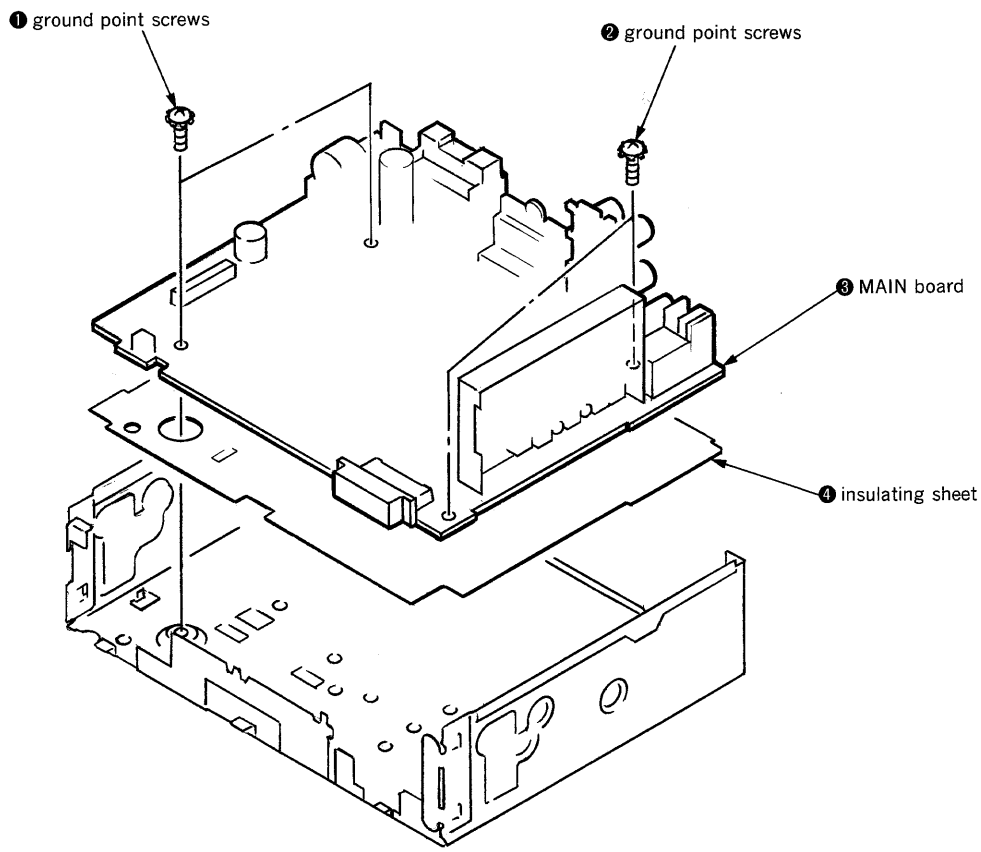
2-2. HEAT SINK



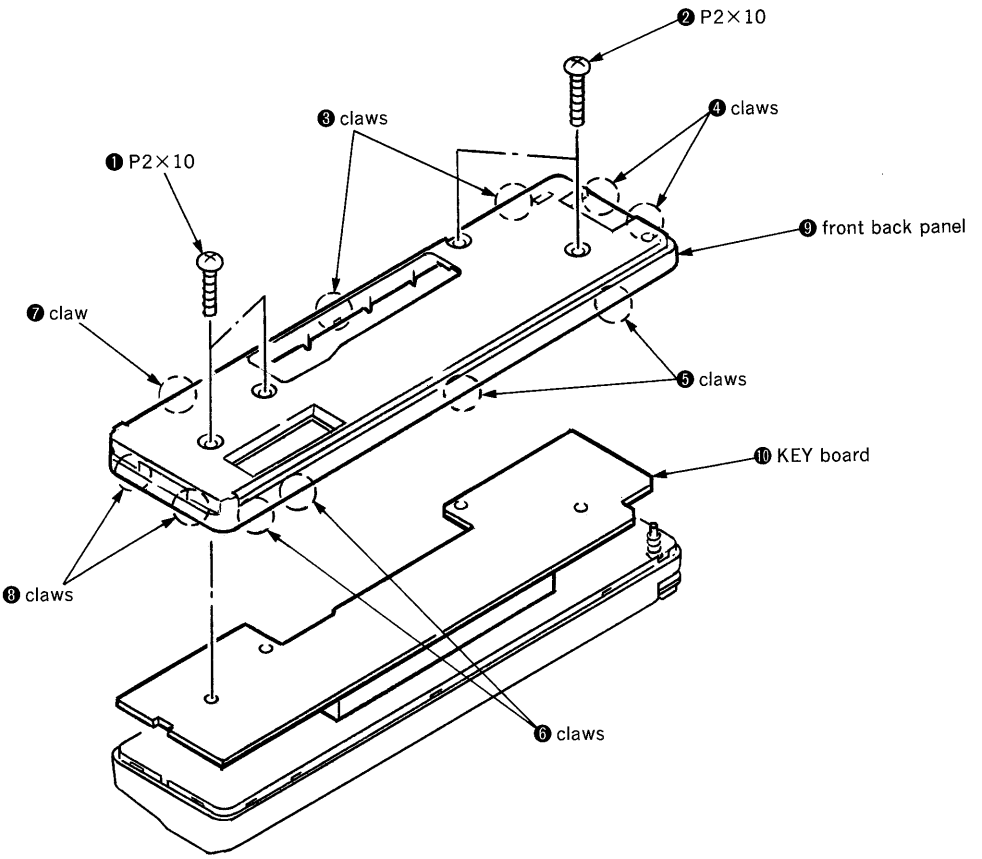
2-3. MECHANISM DECK BLOCK



2-4. MAIN BOARD



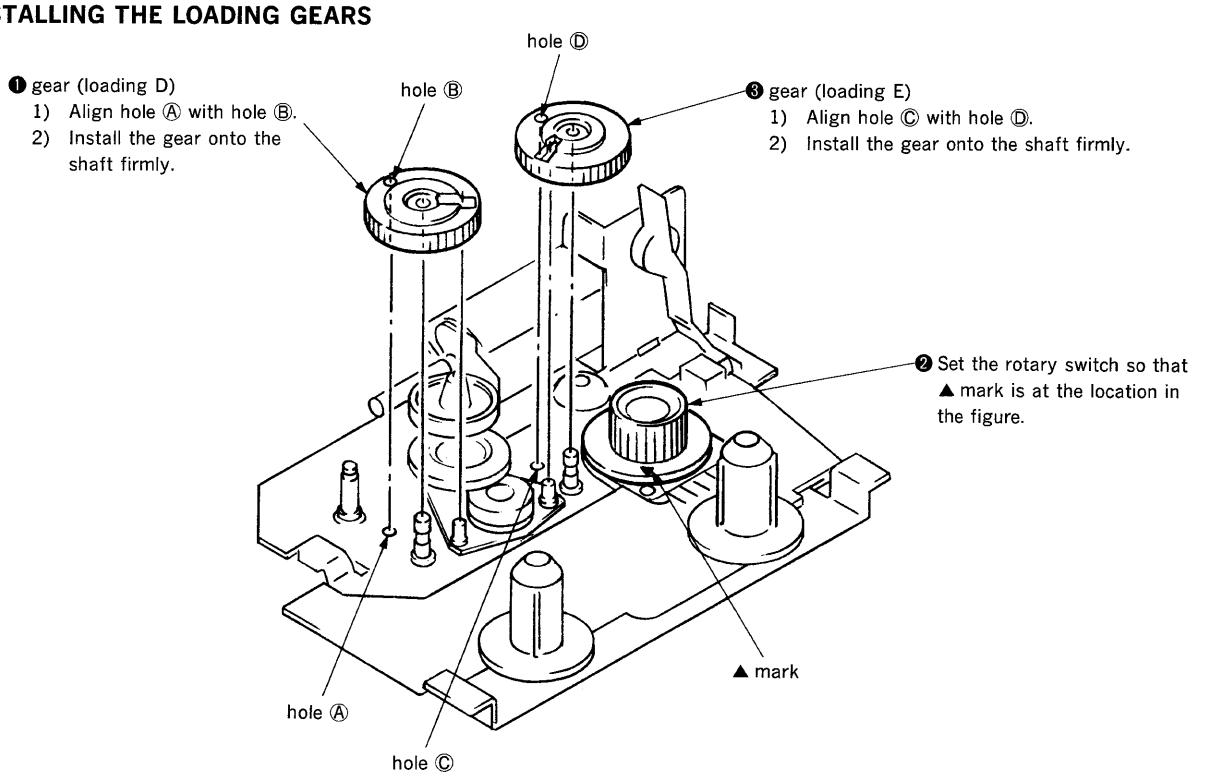
2-5. KEY BOARD


❷ P2×10
❸ claws
❹ claws
❶ P2×10
❾ front back panel
❼ claw
❺ claws
❿ KEY board
❽ claws
❻ claws

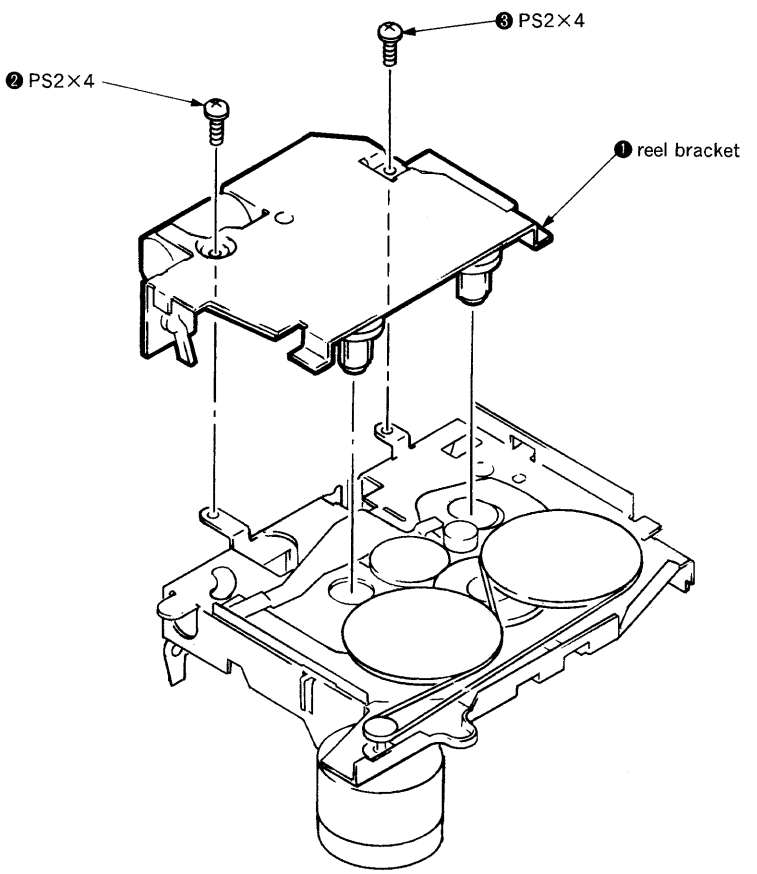
SECTION 3
ASSEMBLY OF MECHANISM DECK

Note : Follow the assembly procedure in the numerical order given.

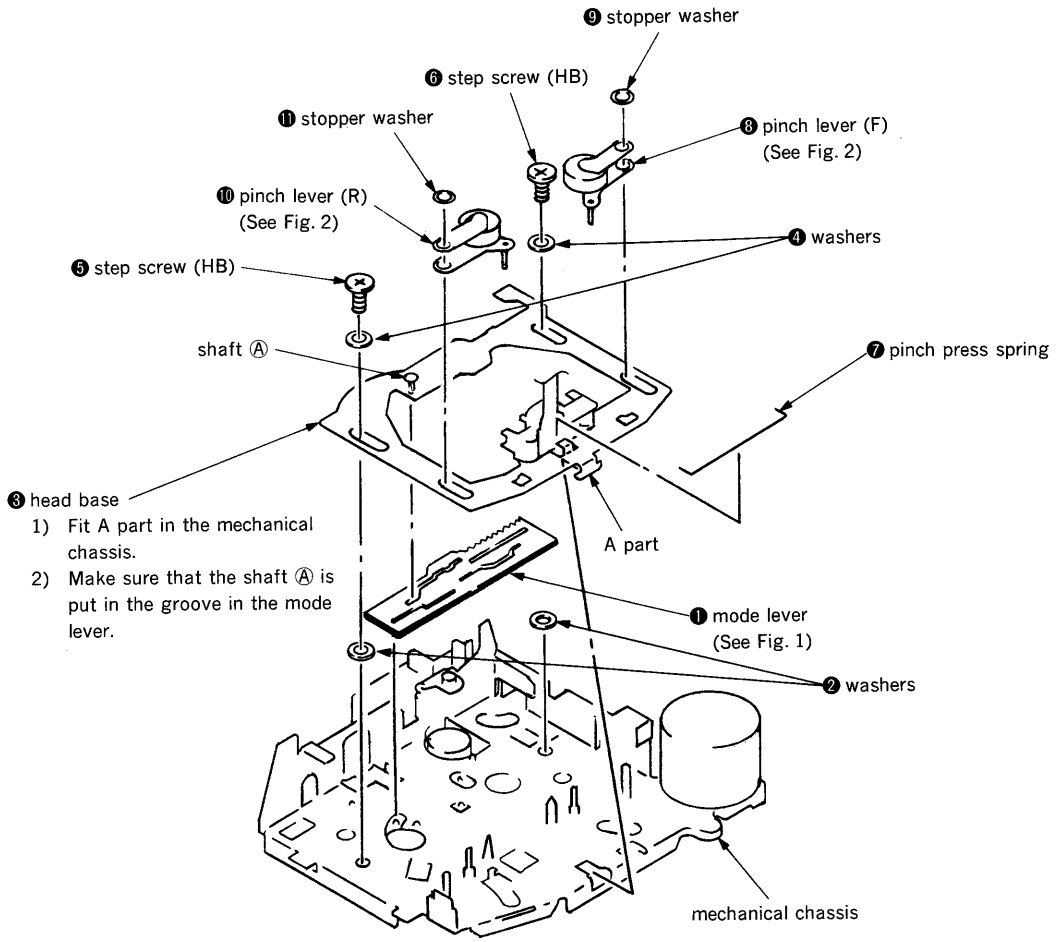
3-1. INSTALLING THE LOADING GEARS


❶ gear (loading D)
1) Align hole Ⓐ with hole Ⓑ.
2) Install the gear onto the shaft firmly.
hole Ⓑ
hole Ⓓ
❸ gear (loading E)
1) Align hole Ⓒ with hole Ⓓ.
2) Install the gear onto the shaft firmly.
❷ Set the rotary switch so that ▲ mark is at the location in the figure.
▲ mark
hole Ⓐ
hole Ⓒ

3-2. INSTALLING THE REEL BRACKET



3-3. INSTALLING THE MODE LEVER AND PINCH LEVERS



1) Align • mark on the rotary switch with hole on the mode lever.
2) Make sure that the two shafts and three projections are located as shown below.

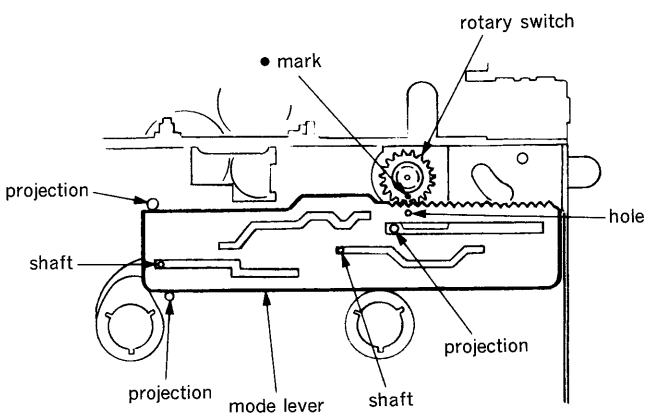


Fig. 1

1) Put the shafts of the pinch levers in the pinch press spring on its head side.

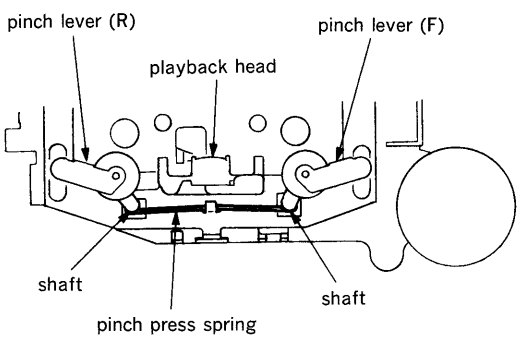
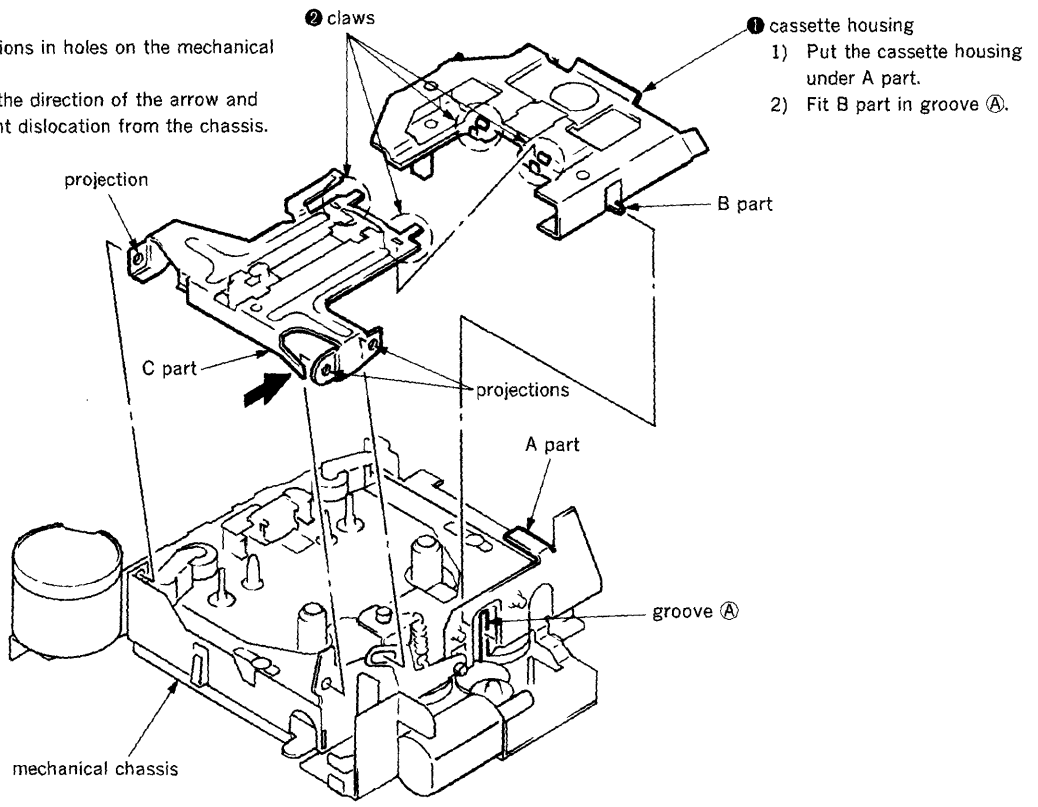
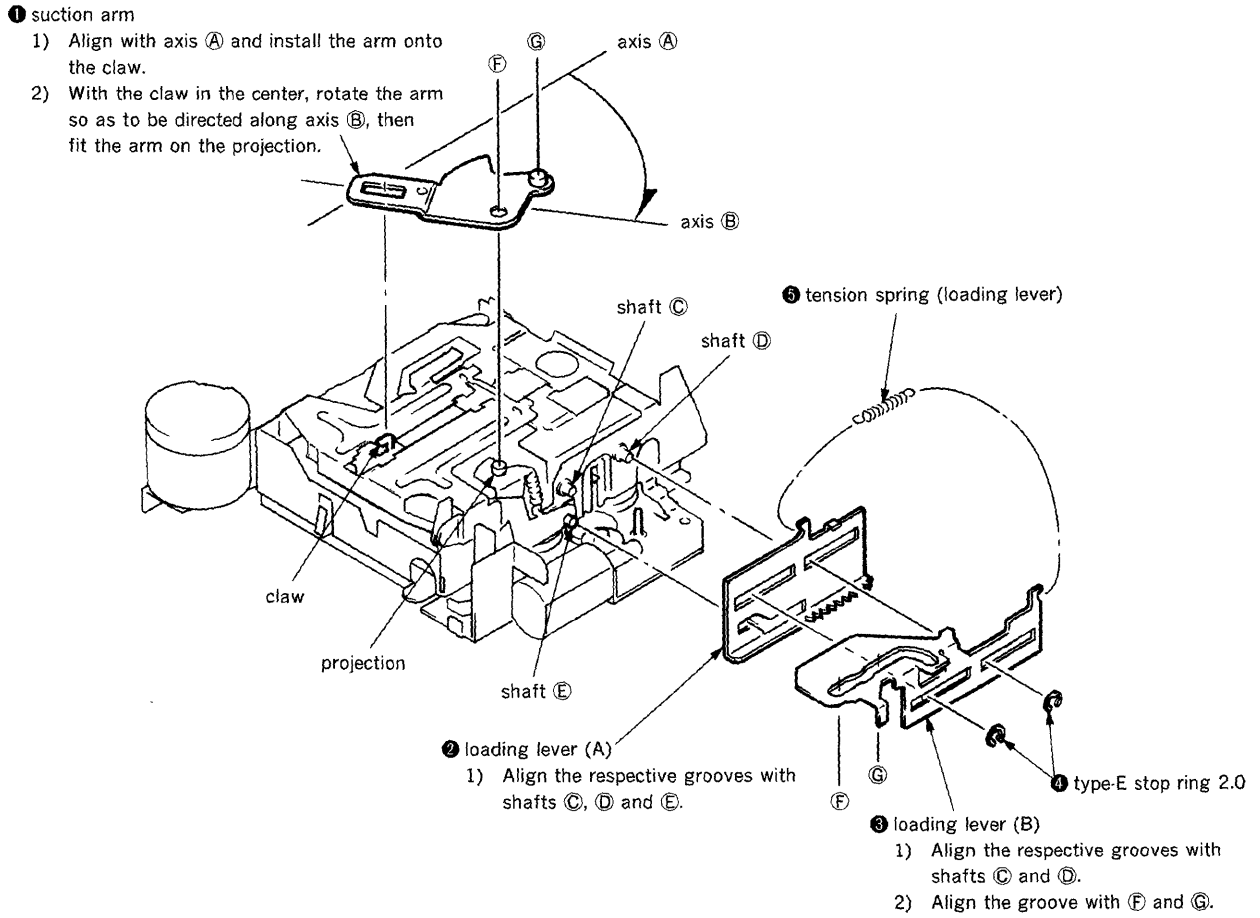


Fig. 2

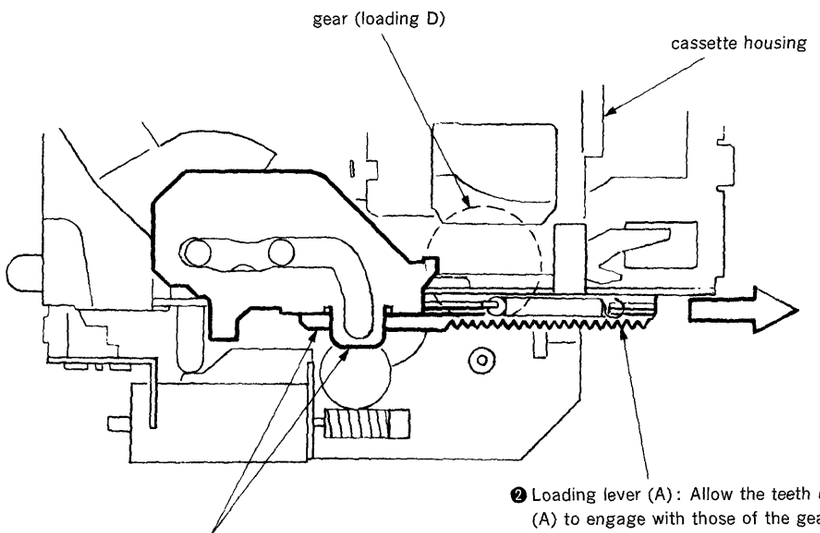
3-4. INSTALLING THE CASSETTE HOUSING


❸ housing hanger
1) Fit three projections in holes on the mechanical chassis.
2) Bend C part in the direction of the arrow and fasten to prevent dislocation from the chassis.
❷ claws
❶ cassette housing
1) Put the cassette housing under A part.
2) Fit B part in groove Ⓐ.
projection
B part
C part
projections
A part
groove Ⓐ
mechanical chassis

3-5. INSTALLING THE LOADING LEVER


❶ suction arm
1) Align with axis Ⓐ and install the arm onto the claw.
2) With the claw in the center, rotate the arm so as to be directed along axis Ⓑ, then fit the arm on the projection.
Ⓕ
Ⓖ
axis Ⓐ
axis Ⓑ
shaft Ⓒ
shaft Ⓓ
❺ tension spring (loading lever)
claw
projection
shaft Ⓔ
❷ loading lever (A)
1) Align the respective grooves with shafts Ⓒ, Ⓓ and Ⓔ.
❹ type-E stop ring 2.0
❸ loading lever (B)
1) Align the respective grooves with shafts Ⓒ and Ⓓ.
2) Align the groove with Ⓕ and Ⓖ.

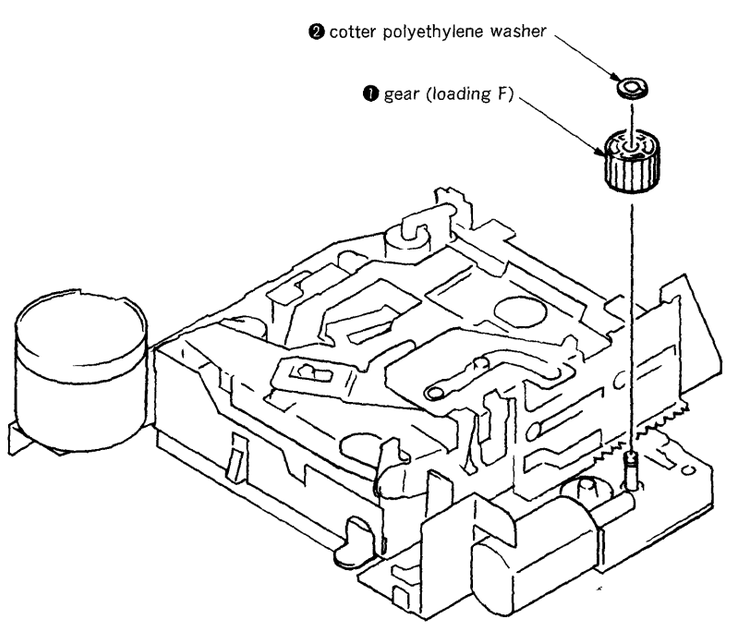
3-6. POSITIONING THE LOADING LEVERS



❶ Loading levers (A) and (B) : Move loading levers (A) and (B) in the direction of the arrow.
(The cassette housing is put down fully at this time.)

❷ Loading lever (A) : Allow the teeth of loading lever (A) to engage with those of the gear (loading D).
(Adjustment method : Retract loading lever (A) by 0.2 to 0.5mm in the opposite direction of the arrow.)

3-7. INSTALLING THE GEAR (LOADING F)



SECTION 4
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Wipe the following components with an absorbent cotton cloth moistened with alcohol before adjustment:
   PB head　　Pinch roller
   Idler　　Rubber belt
   Capstan
2. Demagnetize the PB head using a head demagnetizer.
3. Be careful not to use a magnetized screwdriver.
4. After the adjustment is completed, lock the adjustment parts using screws.
5. Unless otherwise specified, make adjustments at the specified voltage (14.4V).

Torque Measurement

Mode	Torque Meter	Meter Reading
FWD	CQ-102C	30−65g•cm (0.42−0.90 oz•inch)
FWD Back Tension		0.5−4.5g•cm (0.01−0.06 oz•inch)
REV	CQ-102RC	30−65g•cm (0.42−0.90 oz•inch)
REV Back Tension		0.5−4.5g•cm (0.01−0.06 oz•inch)
FF, REW	CQ-201B	60−200g•cm (0.83−2.78 oz•inch)

Tape Tension Measurement

Mode	Tension Meter	Meter Reading
FWD	CQ-403A	more than 90g (more than 3.18 oz)
REV	CQ-403R	

SECTION 5
ELECTRICAL ADJUSTMENTS

TEST MODE

This set have the test mode function. In the test mode, FM Auto Scan/Stop Level and MW Auto Scan/Stop Level adjustments can be performed easier than it in ordinary procedure.

〈Set the Test Mode〉

1. Set the "OFF" mode.
2. Push the preset [4] button.
3. Push the preset [5] button.
4. Press the preset [1] button for more than two seconds.
5. Then the display indicates all lights, the test mode is set.

〈Release the Test Mode〉

1. Push the "OFF" button.

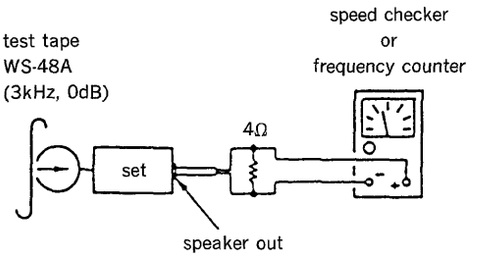
See the adjustment location from on page 19 for the adjustment.

DECK SECTION　**0dB=0.775V**

Tape Speed Adjustment

Procedure:

1. Put the set into the FWD PB mode.



Specification: Constant speed

Speed checker	Frequency counter
−1.5 to +2.5%	2,955 to 3,075Hz

Adjustment Location: See page 19.

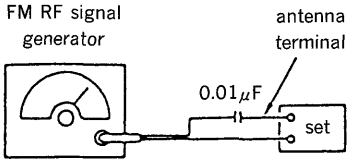
TUNER SECTION **0dB=1μV**

Cautions during repair
When the tuner unit is defective, replace it by a new one because its internal block is difficult to repair.

FM Auto Scan/Stop Level Adjustment

Setting :

TUNER button : FM



Carrier frequency : 98.0MHz
Output level : 22dB (12.6μV)
Mode : mono
Modulation : 1kHz, 22.5kHz deviation (30%)

Procedure :

1. Set to the test mode. (See page 16.)
2. Push the TUNER button and set to FM.

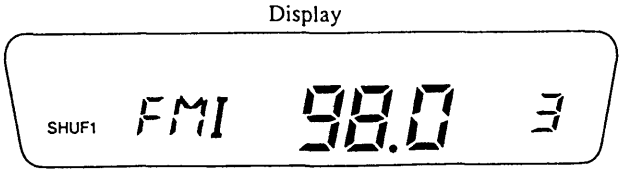
Display

3. Push the preset 3 button.

Display

4. Adjust with the volume RV2 on TU1 so that the "FM" indication turns to "FMI" indication on the display window.
   But, in case of already indicated "FMI", turn the RV2 so that put out light "I" indication and adjustment.

Display

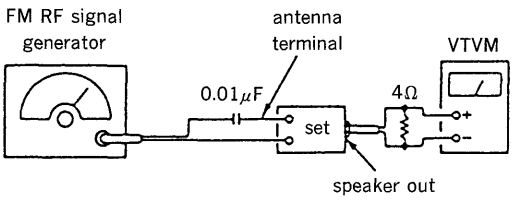


Adjustment Location : See page 19.

FM Noise Focus Adjustment

Setting :

TUNER button : FM



Carrier frequency : 98.0MHz
Output level : 60dB (1mV)
Mode : mono
Modulation : 1kHz, 75kHz deviation (100%)

Procedure :

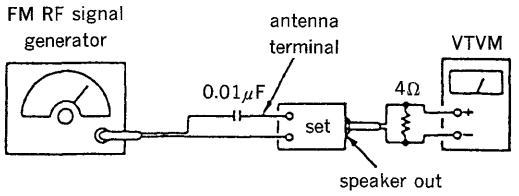
1. Tune the 98.0MHz.
2. The then output level is supposing that (A) dB.
3. Adjust with the volume RV3 on TU1 so that the output level is (A)−32dB then signal generator input set to −20dB.

Adjustment Location : See page 19.

FM Stereo Separation Adjustment

Setting :

TUNER button : FM



Carrier frequency : 98.0MHz
Output level : 70dB (3.2mV)
Mode : stereo
Modulation : main : 1kHz, 20kHz deviation (26.7%)
sub : 1kHz, 20kHz deviation (26.7%)
19kHz pilot : 7.5kHz deviation (10%)

Procedure :

FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV4 on TU1 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV4 on TU1 for minimum reading.

L-CH Stereo separation : Ⓐ−Ⓑ
R-CH Stereo separation : Ⓒ−Ⓓ
The separations of both channels should be equal.

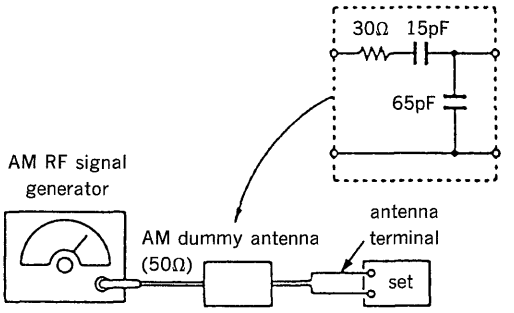
Specification : Separation more than 30dB

Adjustment Location : See page 19.

MW Auto Scan/Stop Level Adjustment

Setting :

TUNER button : MW

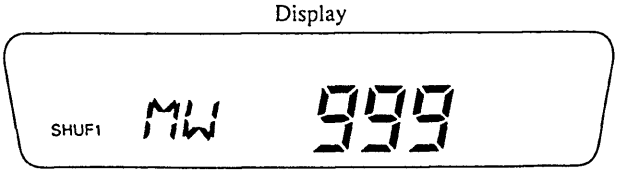


Carrier frequency : 999kHz
30% amplitude modulation by 1kHz signal
Output level : 33dB (44.7μV)

Procedure :

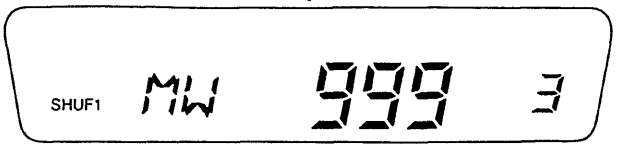
1. Set to the test mode. (See page 16.)
2. Push the [TUNER] button and set to MW.

Display



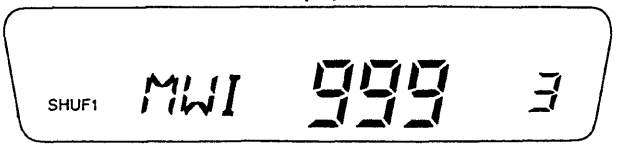
3. Push the preset [3] button.

Display



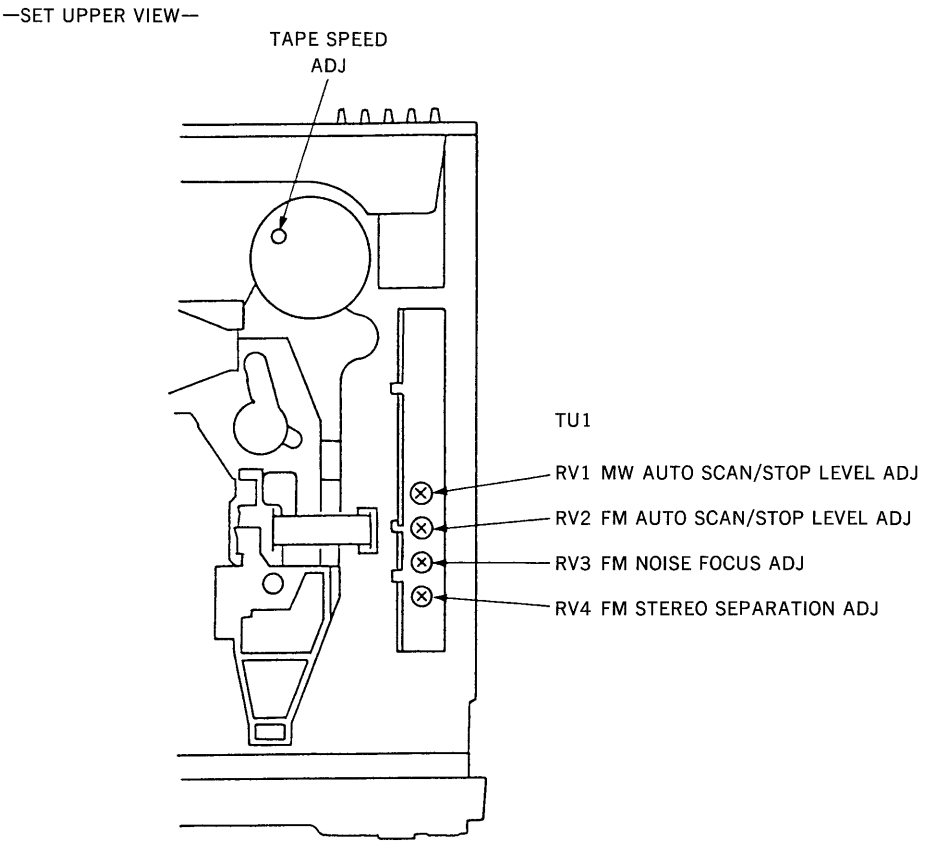
4. Adjust with the volume RV1 on TU1 so that the "MW" indication turns to "MWI" indication on the display window.
But, in case of already indicated "MWI", turn the RV1 so that put out light "I" indication and adjustment.

Display



Adjustment Location : See page 19.

Adjustment Location :



SECTION 6
DIAGRAMS

6-1. IC PIN DESCRIPTION

• IC501 μPD17708GC-523-3B9 (SYSTEM CONTROL)

Pin No.	Pin Name	I/O	Pin Description
1	ILLIN	I	Illumination signal detection input terminal
2	POS3	I	Position signal detection input terminal
3	POS2	I	Position signal detection input terminal
4	POS0	I	Position signal detection input terminal
5	POS1	I	Position signal detection input terminal
6	TAPEON	O	Tape power control output terminal. At TAPE-ON : High output
7	CM ON	O	Capstan motor control output terminal. At CM-ON : High output
8	LM LOD	O	Loading motor control output terminal (LOADING direction). At LM-LOD : High output
9	LM EJ	O	Loading motor control output terminal (EJECT direction). At LM-EJ : High output
10	TUNON	O	TUNER power control output terminal. At TUNER-ON : High output
11	FM ON	O	FM power control output terminal. At FM-ON (both playing and behind) : High output
12	PW ON	O	System power control output terminal. At PW-ON : High output
13	MUT	O	System mute control output terminal. At MUTE : High output
14	VOLCE	O	Electric volume serial chip enable output terminal. At VOL-CE : High output
15	VOLCKO	O	Electric volume serial clock output terminal
16	VOLSO	O	Electric volume serial data output terminal
17	AMPON	O	Power amplifier power control output terminal. At AMP-ON : High output
18	$\overline{\text{AMPMUT}}$	O	Power amplifier mute control output terminal. At AMP-MUTE : Low output
19	$\overline{\text{DX}}$ LO	O	DX/LOCAL select control output terminal. At DX : Low output, at LOCAL : High output
20	$\overline{\text{AM MONO}}$	O	AM force monaural output terminal. Not used in this set.
21	GND	—	GND
22	DSTSEL1	I	Destination setting terminal
23	DSTSEL0	I	Destination setting terminal
24	KEYIN1	I	KEY input
25	KEYIN0	I	KEY input
26	RC IN0	I	Rotary commander input terminal
27	VSM	I	FM/AM common signal meter A/D change input terminal
28	AMIFIN	—	AM IF input terminal
29	FMIFIN	—	FM IF input terminal
30	VDD2	—	Power supply terminal
31	FM OSC	—	FM local oscillation input terminal
32	AM OSC	—	AM local oscillation input terminal
33	GND	—	GND
34	N. C.	—	Not used.
35	EO1	—	Main charge pump output terminal
36	TEST0	—	Device test mode input terminal
37	$\overline{\text{AM STIN}}$	—	AM stereo signal detection input terminal. Connected to GND in this set.
38	$\overline{\text{SEKOUT}}$	O	SEEK control output terminal. At SEEK : Low output
39	$\overline{\text{MW}}$ SW	O	MW/SW power select output terminal. At MW : Low output, at SW : High output
40	BEEP	O	Buzzer control output terminal
41	KEYACK	I	Key acknowledge input terminal
42	BU IN	I	Back-up voltage detection input terminal

Pin No.	Pin Name	I/O	Pin Description
43	MTLSEL	I/O	METAL control input/output terminal. At AUTO METAL: METAL input terminal. At METAL: Low input, at NORMAL: High input. At no AUTO METAL: METAL output terminal. At METAL: Low output, at NORMAL: High output.
44	DOLON	I/O	DOLBY-NR control input/output terminal. At DOLBY-NR ON: High output
45	$\overline{\text{AMSIN}}$	I	Tape music with/without detection input terminal. With music: Low input, without music: High input
46	ST	I/O	Both as FM STEREO input and FM MONO output terminal. At FM STEREO: Low input, at FM MONO: High output
47	AMS ON	O	At AMS: Low output
48	$\overline{\text{N}}$ ROUT	O	Forward/Reverse detection output terminal. At FORWARD: Low output, at REVERSE: High output
49	TAPMUT	O	Tape mute control output terminal. At MUTE: High output
50	ILLON	O	Illumination power control output terminal. At ACC-ON: High output (P-SEL: ON)
51	SD IN	I	Station detector detection input terminal. At with SD: High input
52	$\overline{\text{NOSESW}}$	I	Front panel with/without detection input terminal. At with front panel: Low input
53	REL S	I	Reel table reverse direction rotation detection input terminal
54	REL T	I	Reel table forward direction rotation detection input terminal
55	$\overline{\text{ACCIN}}$	I	ACC power control input terminal. With ACC: Low input
56	$\overline{\text{TESTIN}}$	I	Test mode setting input terminal
57	RC IN1	I	Rotary commander input terminal
58	PW SEL	I	Power select first setting input terminal
59	MTLIN	I	AUTO METAL detection input terminal. At AUTO-METAL: Low input
60	KEYACT	I	Key action detection input terminal
61	KEYSEL0	I	Key function select setting input terminal
62	KEYSEL1	I	Key function select setting input terminal
63	COLORSEL	I	Illumination color first setting input terminal. At AMBER: Low input, at GREEN: High input
64	LCDCE	O	LCD chip enable output terminal
65	LCDCKO	O	LCD serial clock output terminal
66	LCDSO	O	LCD serial data output terminal
67	$\overline{\text{LCDINH}}$	O	LCD blank display control output terminal. At LIGHT-OFF: Low output
68	UNICKI	I	Serial clock input terminal
69	UNISO	O	Serial data output terminal
70	UNISI	I	Serial data input terminal
71	UNICKO	O	Serial clock output terminal
72	$\overline{\text{BUSON}}$	O	BUS ON control output terminal
73	$\overline{\text{SYSRST}}$	O	System reset control output terminal
74	VREG	—	CPU regulator output terminal
75	GND	—	GND
76	X OUT	—	Connect to crystal (4.5MHz).
77	X IN	—	Connect to crystal (4.5MHz).
78	CE	—	Device operation select, CE reset and divided signal input terminal.
79	VDD	—	Power supply terminal
80	$\overline{\text{RESET}}$	—	RESET input terminal. At RESET: Low input

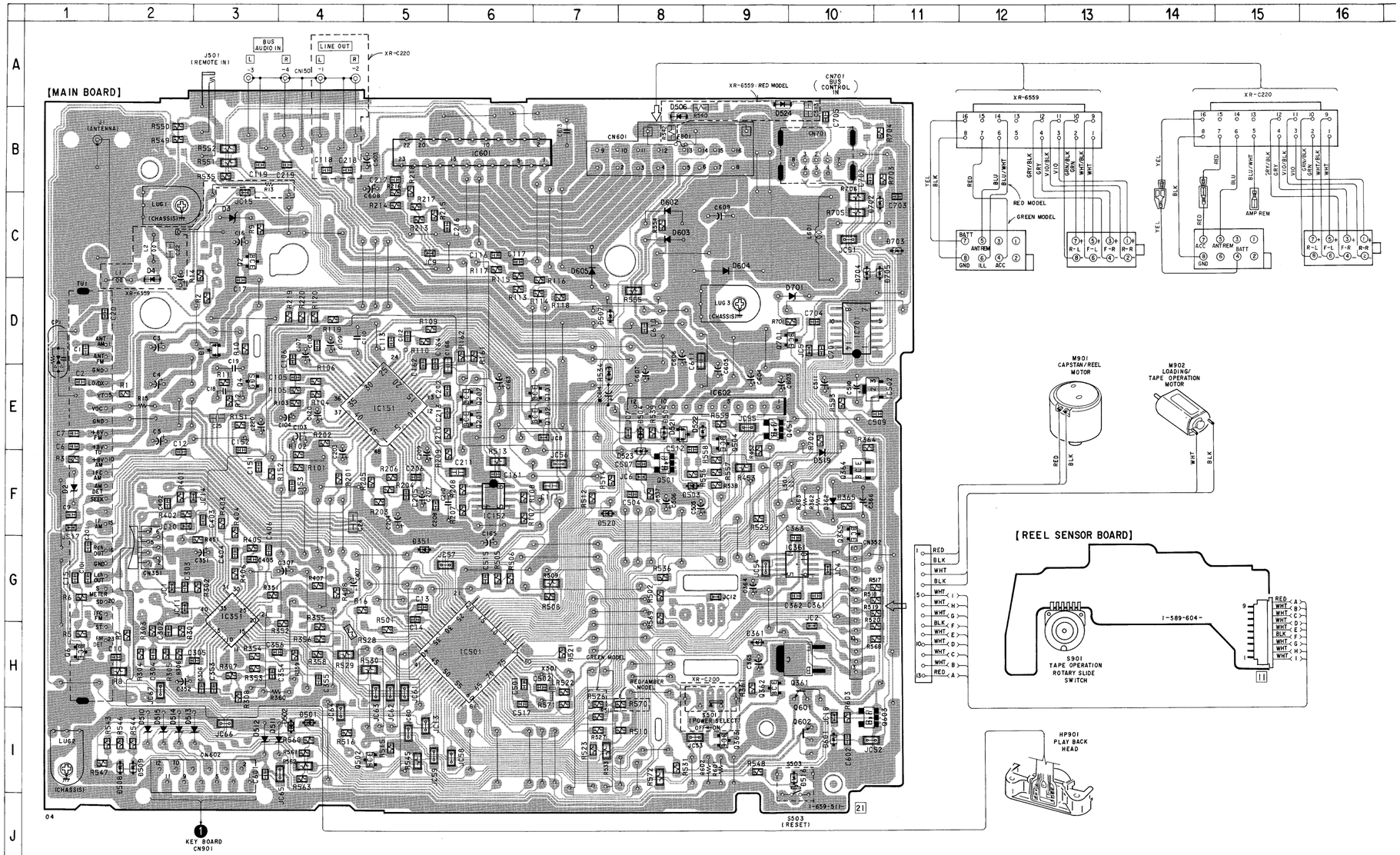
6-2. PRINTED WIRING BOARDS—MAIN SECTION—

• Semiconductor Location

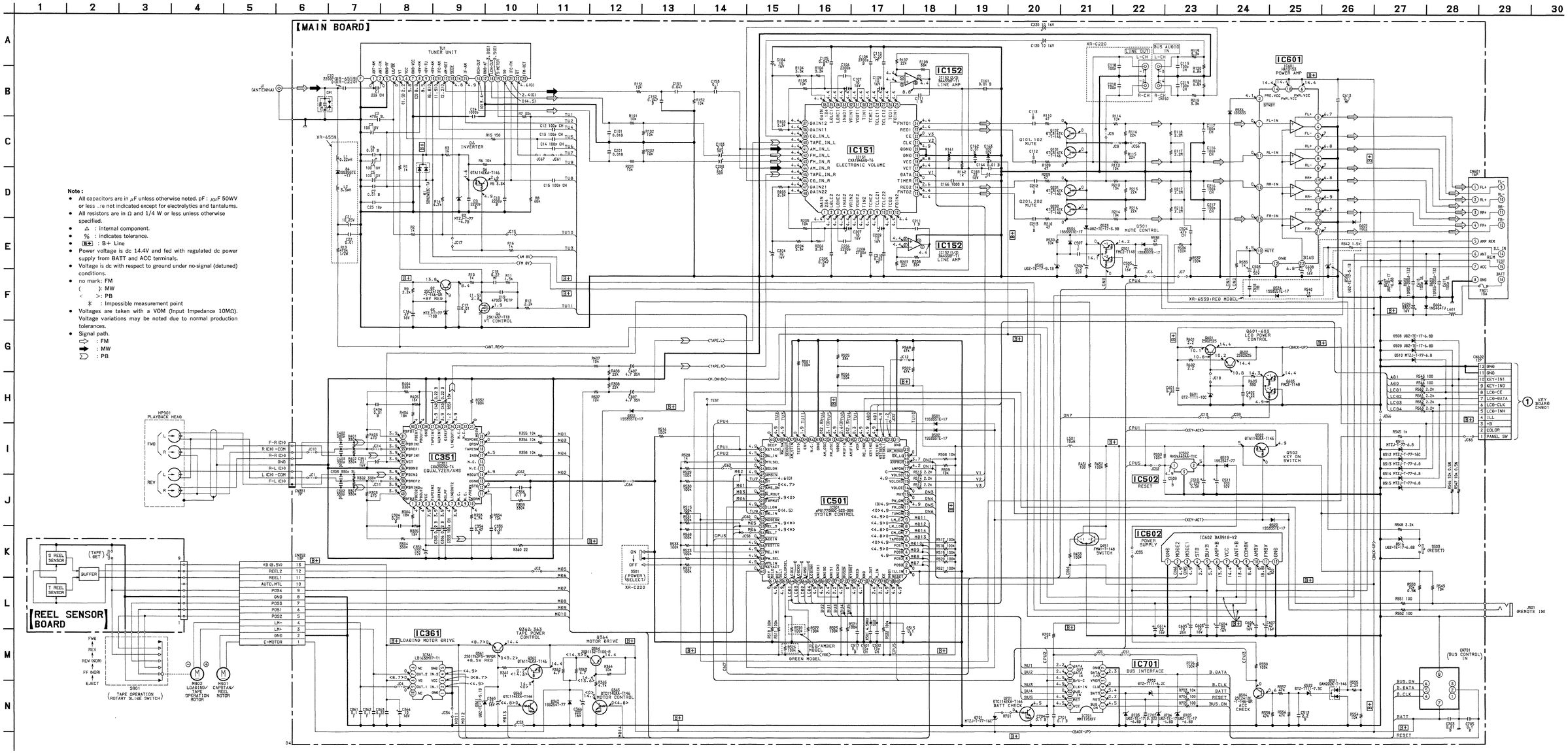
Ref. No.	Location	Ref. No.	Location
D1	D-3	D703	C-11
D2	F-1	D704	C-10
D3	C-3	D705	C-10
(D4)	C-2		
D351	G-5	IC151	E-5
D361	H-9	IC152	F-6
D362	F-10	IC351	G-3
D501	I-4	IC361	G-10
D502	I-4	IC501	H-6
D503	F-8	IC502	E-11
D504	E-8	IC601	B-6
D505	E-8	IC602	E-9
⟨D506⟩	B-8	IC701	D-10
D507	D-7		
D508	I-2	Q2	C-3
D509	I-2	Q4	E-3
D510	I-2	Q6	H-1
D511	I-3	Q101	E-7
D512	I-3	Q102	E-7
D513	I-2	Q201	E-6
D514	I-2	Q202	E-6
D515	I-2	Q361	H-10
D516	I-10	Q362	H-9
D519	F-10	Q363	I-9
D520	F-7	Q364	F-10
D521	E-8	Q365	F-10
D522	E-8	Q451	E-9
D523	F-8	Q501	F-8
⟨D524⟩	B-9	Q502	I-5
D601	I-10	Q504	E-9
D602	C-8	Q601	H-10
D603	C-8	Q602	I-10
D604	C-9	Q603	I-11
D605	C-7	Q701	D-10
D701	D-10		
D702	C-10	R534	E-7

( ): XR-6559 only
⟨ ⟩: XR-6559 : RED indicator only

Note :
- ○— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.

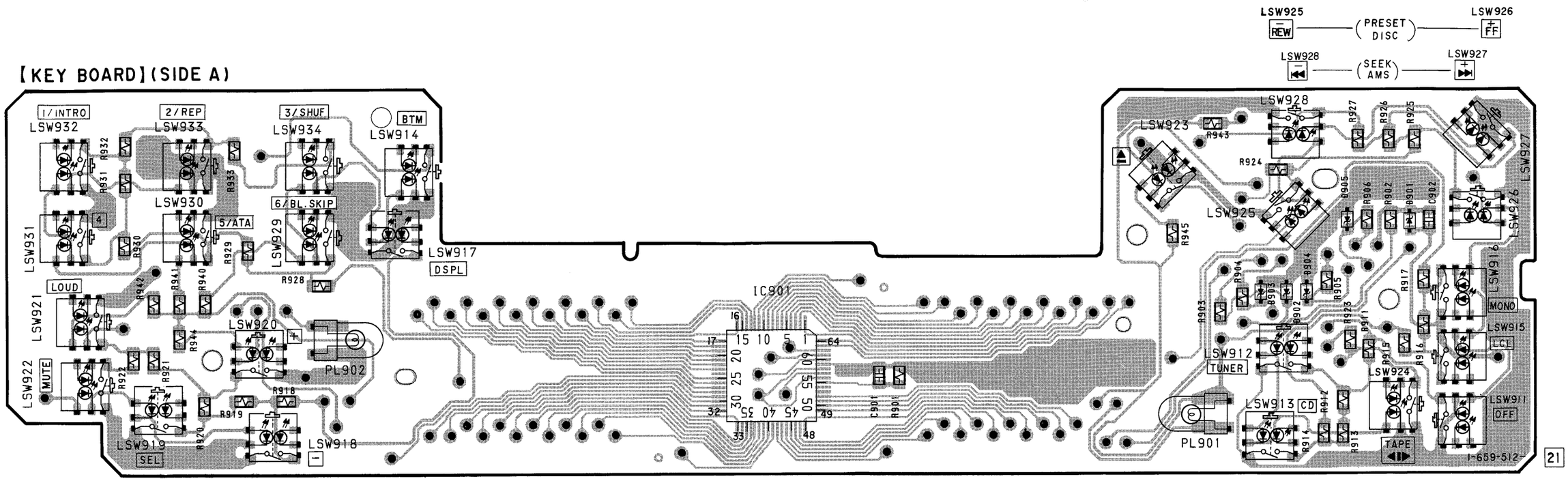


6-3. SCHEMATIC DIAGRAM—MAIN SECTION— • Refer to page 33 for IC Block Diagrams.

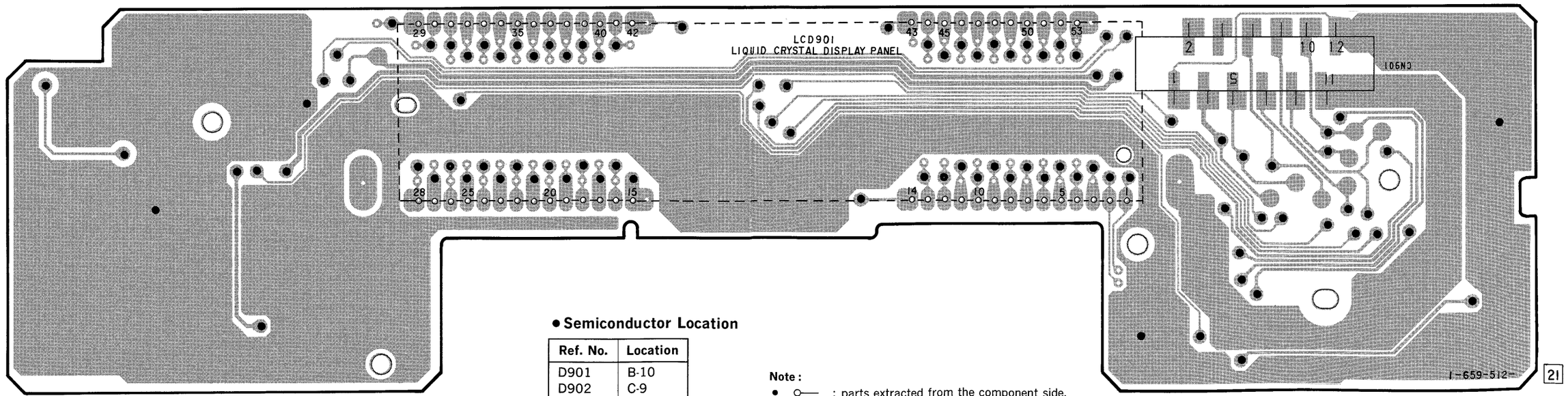

【MAIN BOARD】
【REEL SENSOR BOARD】
IC151
IC152
IC351
IC361
IC501
IC502
IC601
IC602
IC701
Q351, 352
Q362, 363
Q364
Q501
Q502
Q601-605
Q701
Note :
• All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less ...re not indicated except for electrolytics and tantalums.
• All resistors are in Ω and 1/4 W or less unless otherwise specified.
• △ : internal component.
• % : indicates tolerance.
• B+ : B+ Line
• Power voltage is dc 14.4V and fed with regulated dc power supply from BATT and ACC terminals.
• Voltage is dc with respect to ground under no-signal (detuned) conditions.
• no mark: FM
( ): MW
< >: PB
✳ : Impossible measurement point
• Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
• Signal path.
⇨ : FM
➡ : MW
⇨ : PB
XR-6559:RED MODEL
GREEN MODEL
RED/AMBER MODEL
XR-C220
(KEY BOARD CN501)
(REMOTE IN)
(BUS CONTROL) IN

6-4. PRINTED WIRING BOARD—PANEL SECTION—

【KEY BOARD】(SIDE A)



【KEY BOARD】(SIDE B)



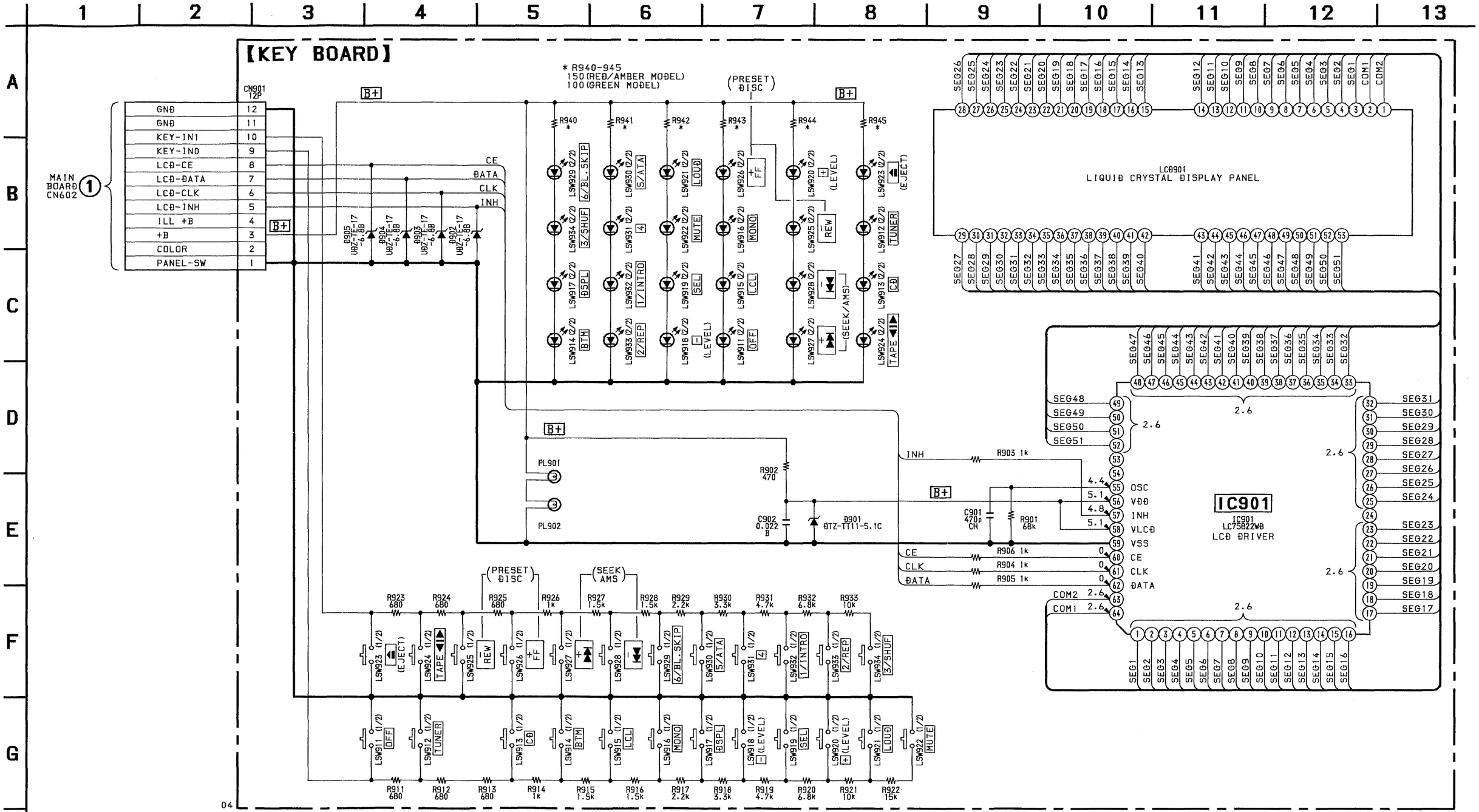
04

• Semiconductor Location

Ref. No.	Location
D901	B-10
D902	C-9
D903	C-9
D904	C-9
D905	B-10
IC901	C-6

Note :

- ○— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern on the side which is seen.
  (The other layer's patterns are not indicated.)

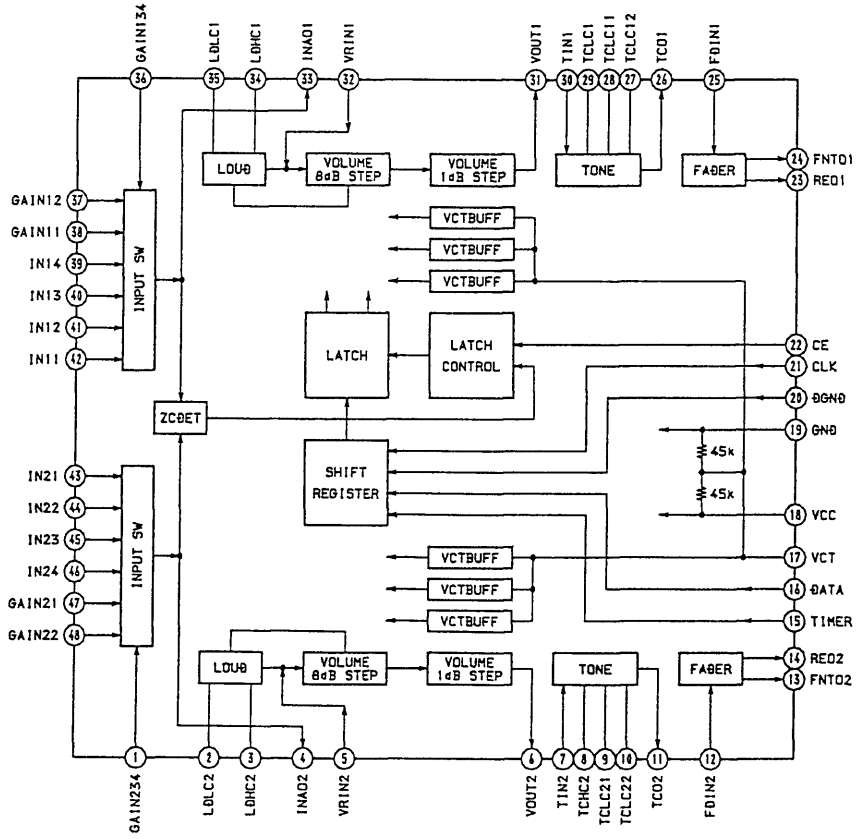


Note :

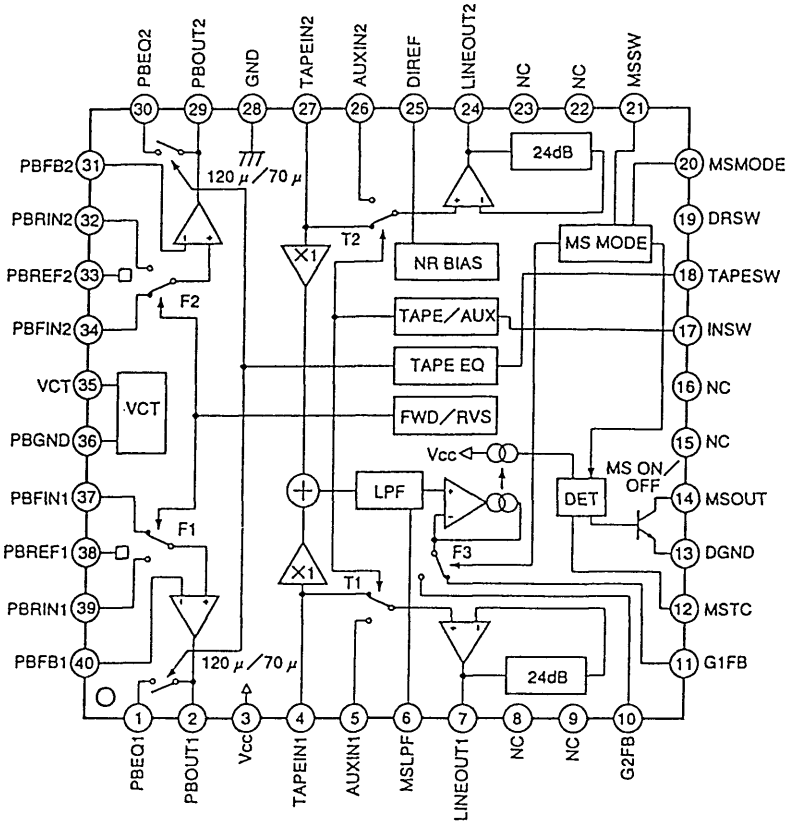
- All capacitors are in μF unless otherwise noted. pF : $\mu\mu$F 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- B+ : B+ Line
- Power voltage is dc 14.4V and fed with regulated dc power supply from BATT and ACC terminals.
- Voltage is dc with respect to ground under no-signal (detuned) conditions.
- no mark: FM
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.

• **IC Block Diagrams**

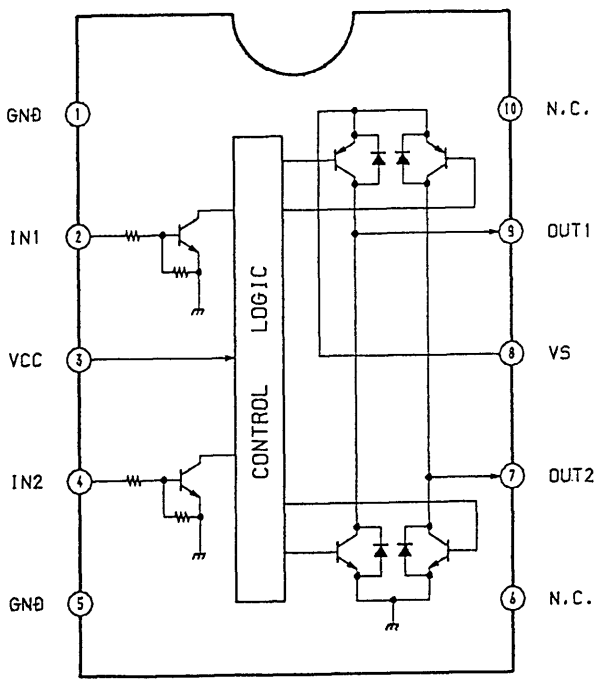
IC151 CXA1946AQ-T6



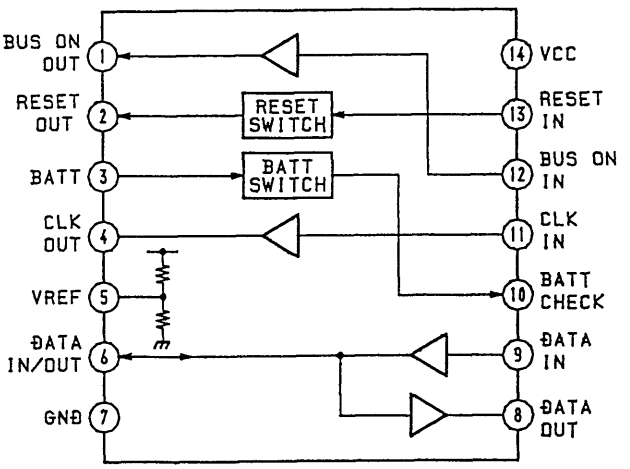
IC351 CXA2509Q-T4



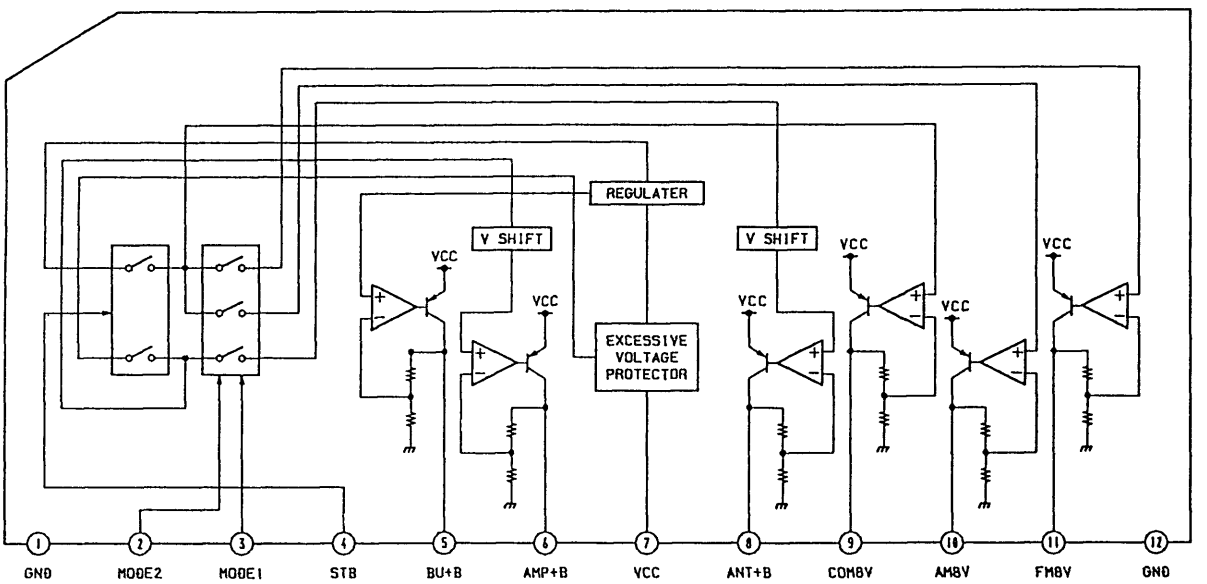
IC361 LB1638MTP-T1



IC701 MM1175XFF



IC602 BA3918-V2

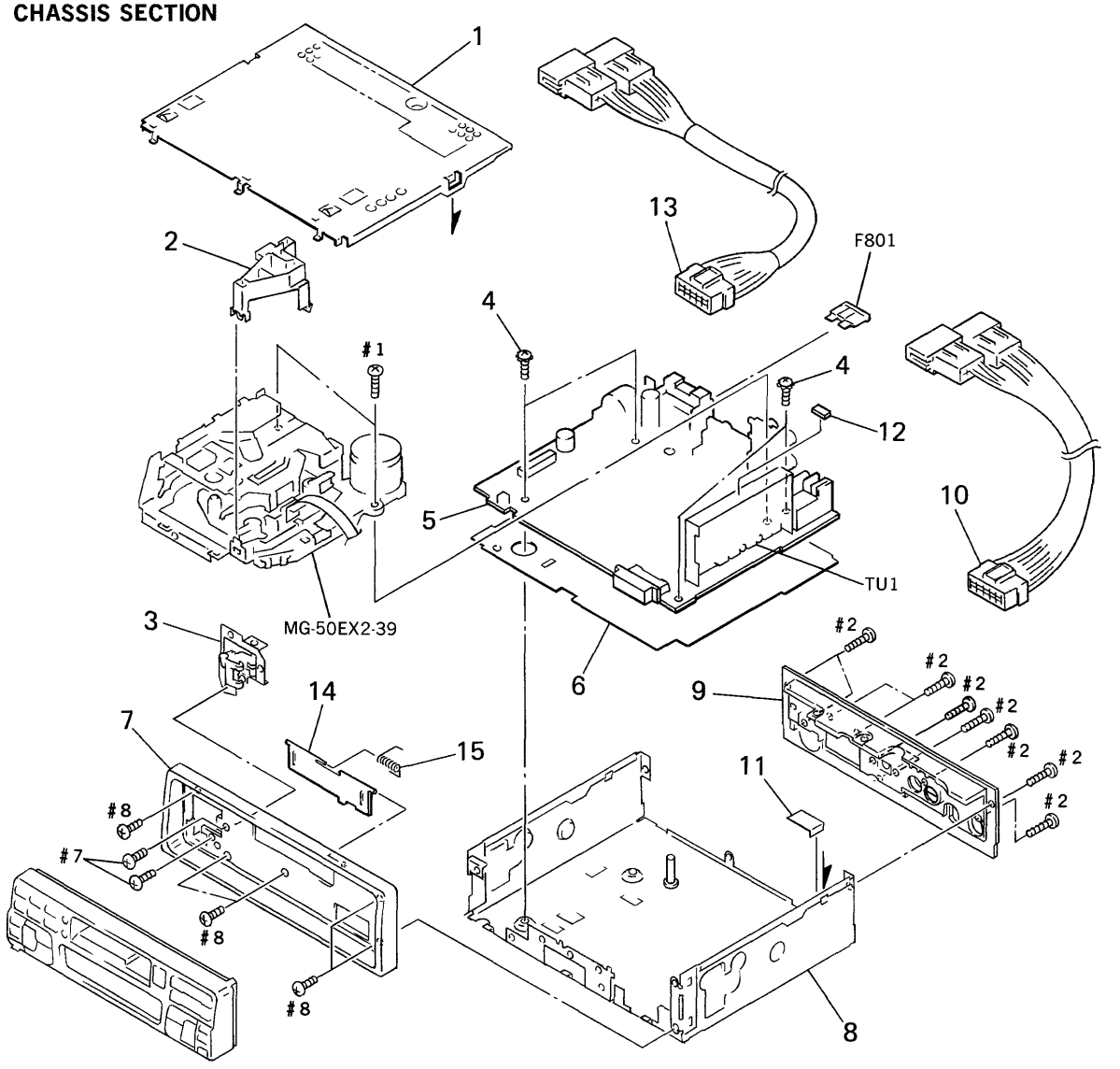


SECTION 7
EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE)... (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

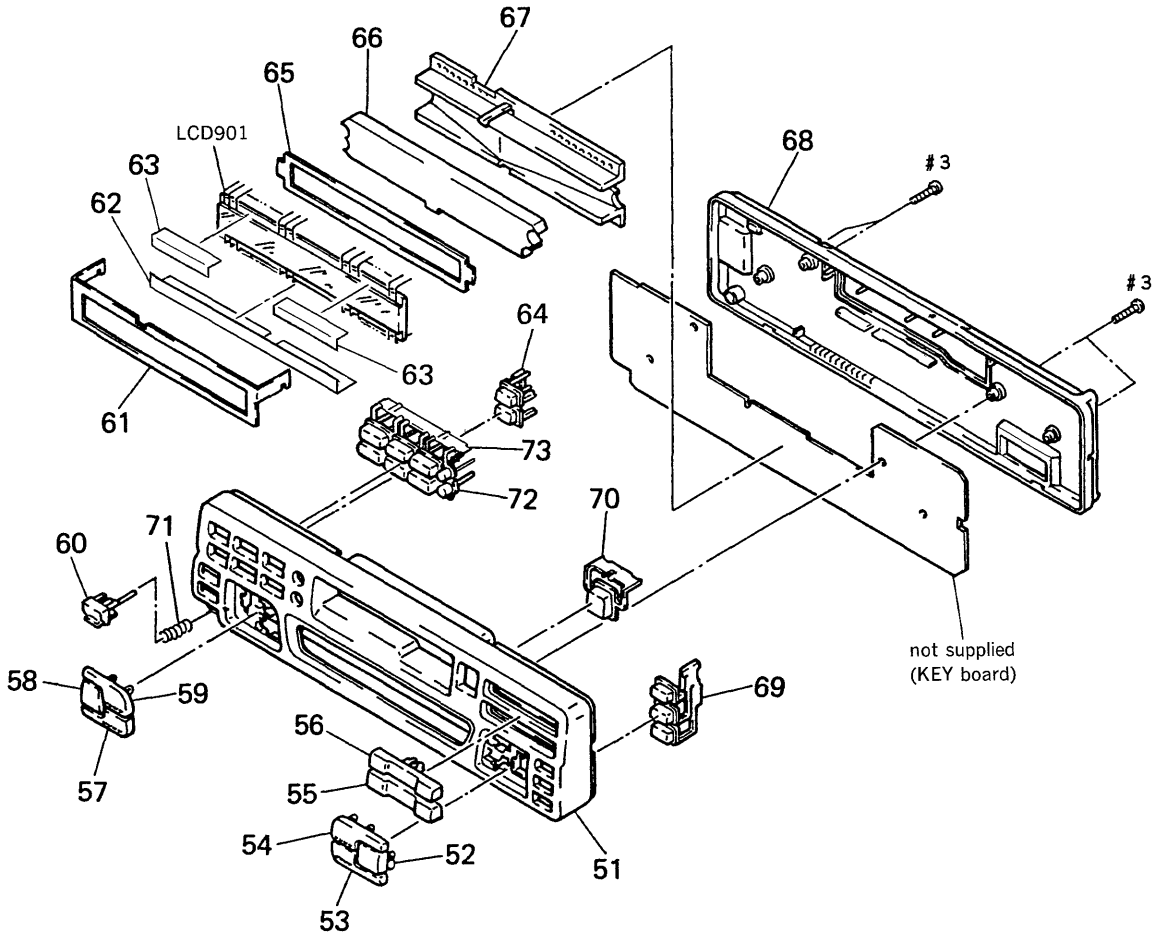
7-1. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
* 1	X-3369-845-1	COVER ASSY	
2	3-916-872-01	GUIDE	
3	X-3367-636-1	LOCK ASSY	
4	3-915-923-01	SCREW, GROUND POINT	
* 5	A-3309-061-A	MAIN BOARD, COMPLETE (C220:AMBER)	
* 5	A-3309-064-A	MAIN BOARD, COMPLETE (C220:GREEN)	
* 5	A-3309-069-A	MAIN BOARD, COMPLETE (6559:RED)	
* 5	A-3309-072-A	MAIN BOARD, COMPLETE (6559:GREEN)	
* 6	3-931-220-11	SHEET, INSULATING	
7	3-921-625-01	PANEL, SUB	
* 8	X-3369-844-1	CHASSIS ASSY	

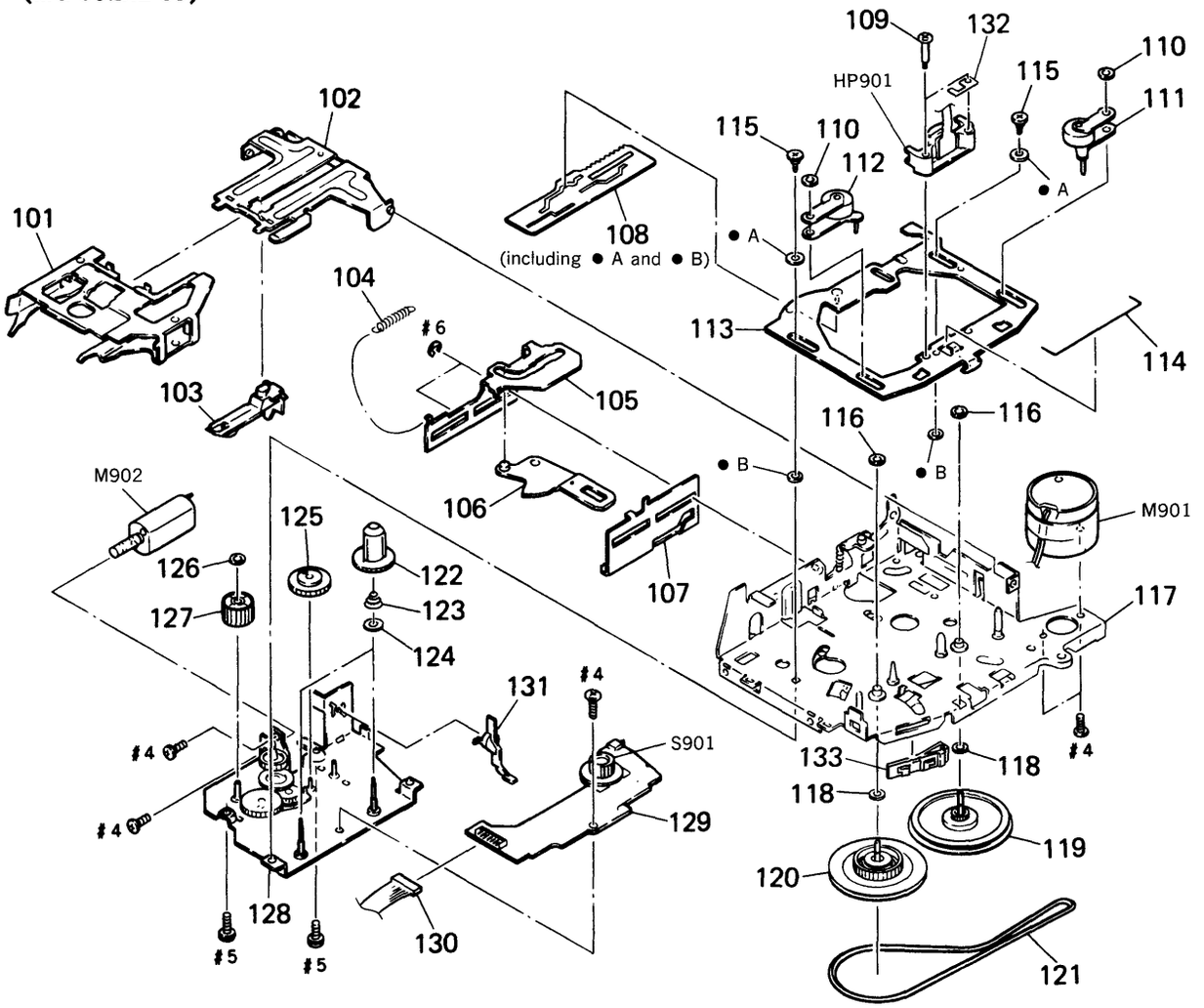
Ref. No.	Part No.	Description	Remark
* 9	3-931-219-01	HEAT SINK (C220)	
* 9	3-931-219-21	HEAT SINK (6559)	
10	1-776-527-11	CORD (WITH CONNECTOR) (ISO) (C220)	
* 11	3-355-209-01	PLATE (B), GROUND	
12	9-911-840-XX	CUSHION (U)	
13	1-776-208-11	CORD (WITH CONNECTOR) (VAG-UK) (6559:RED)	
13	1-776-208-21	CORD (WITH CONNECTOR) (VAG-UK) (6559:GREEN)	
14	3-918-583-31	DOOR, CASSETTE	
15	3-913-076-01	SPRING (C DOOR), TORSION	
F801	1-533-331-11	FUSE (BLADE TYPE) (AUTO FUSE) 15A	
TU1	A-3282-012-A	TUNER UNIT (TUX-006)	

7-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	3-921-623-41	PANEL, FRONT (C220)	
51	3-921-623-61	PANEL, FRONT (6559)	
52	3-921-628-01	BUTTON (TAPE)	
53	3-921-630-21	BUTTON (AF/TA)	
54	3-921-629-01	BUTTON (TUNER)	
55	3-921-635-11	BUTTON (PRESET)	
56	3-921-634-01	BUTTON (SEEK)	
57	3-921-632-01	BUTTON (-)	
58	3-921-633-01	BUTTON (SEL)	
59	3-921-631-01	BUTTON (+)	
60	3-930-844-01	BUTTON (RELEASE)	
* 61	3-921-659-01	PLATE (LCD), GROUND	
* 62	3-921-726-01	SHEET (LCD) (L)	
* 63	3-921-727-01	SHEET (LCD) (S)	
64	3-921-627-01	BUTTON (2 GANG)	
* 65	3-935-363-11	SHEET (REFLECTOR)	
* 66	3-921-656-01	PLATE, LIGHT GUIDE	
* 67	3-921-957-01	HOLDER (LCD)	
68	3-921-624-01	PANEL, FRONT BACK	
69	3-921-626-11	BUTTON (3 GANG)	
70	3-921-636-01	BUTTON (EJECT)	
71	3-375-373-01	SPRING (RELEASE)	
72	3-921-638-12	BUTTON (4-6)	
73	3-921-637-32	BUTTON (1-3)	
LCD901	1-801-161-11	DISPLAY PANEL, LIQUID CRYSTAL	

7-3. MECHANISM DECK SECTION (MG-50EX2-39)



Ref. No.	Part No.	Description	Remark
101	3-928-222-01	HOUSING (2), CASSETTE	
102	3-912-882-01	HANGER (2), HOUSING	
103	3-912-884-01	CATCHER	
104	3-912-885-01	SPRING (LOADING LEVER), TENSION	
* 105	3-912-892-01	LEVER (B), LOADING	
* 106	3-912-883-01	ARM, SUCTION	
107	3-922-941-01	LEVER (LOADING A)	
* 108	X-3370-516-1	LEVER (SV) ASSY, MODE	
109	3-927-100-11	SCREW (+PS 2X10), SPECIAL	
110	3-579-788-01	WASHER, STOPPER	
111	X-3368-266-1	PINCH LEVER (F) ASSY	
112	X-3368-267-1	PINCH LEVER (R) ASSY	
113	X-3370-824-1	BASE ASSY (HD2), HEAD	
114	3-912-879-01	SPRING, PINCH PRESS	
115	3-931-184-01	SCREW (HB2), STEP	
116	3-364-151-01	WASHER	
117	X-3368-841-1	CHASSIS (SV) ASSY (A), MECHANICAL	
118	3-701-437-21	WASHER	
119	3-930-932-01	FLYWHEEL (F) (SEF)	

Ref. No.	Part No.	Description	Remark
120	X-3371-303-1	CLUTCH (SEF) ASSY, FR	
121	3-912-896-01	BELT	
122	X-3368-843-1	GEAR ASSY, REEL	
123	3-917-222-01	SPRING (B-T), COIL	
124	3-917-324-01	WASHER (B-T)	
125	3-912-888-03	GEAR (LOADING E)	
126	3-321-813-01	WASHER, COTTER POLYETHYLENE	
127	3-912-889-01	GEAR (LOADING F)	
128	X-3368-842-1	BRACKET (SV) ASSY, REEL	
129	1-589-604-11	REEL SENSOR BOARD	
130	1-765-460-12	CORD (WITH CONNECTOR)	
131	3-916-358-01	LEVER (TAPE IN 2)	
* 132	3-917-258-01	PLATE, GROUND	
133	3-919-553-01	GUIDE (BELT)	
HP901	1-500-196-21	HEAD, MAGNETIC (PLAYBACK)	
M901	X-3368-684-1	MOTOR ASSY, MAIN (CAPSTAN/REEL)	
M902	X-3368-685-1	MOTOR ASSY, SUB (LOADING/TAPE OPERATION)	
S901	1-692-885-11	SWITCH, ROTARY SLIDE (TAPE OPERATION)	

KEY

SECTION 8
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
  RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA ..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indicating parts by reference number, please include the board.

- Abbreviation
  IT : Italian model
  G : German model

Ref.No.	Part No.	Description			Remark
		KEY BOARD			
		*********			
*	3-921-656-01	PLATE, LIGHT GUIDE			
*	3-921-659-01	PLATE (LCD), GROUND			
*	3-921-726-01	SHEET (LCD) (L)			
*	3-921-727-01	SHEET (LCD) (S)			
*	3-921-957-01	HOLDER (LCD)			
*	3-935-363-11	SHEET (REFLECTOR)			
		< CAPACITOR >			
C901	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C902	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
		< CONNECTOR >			
CN901	1-764-423-11	PIN, CONNECTOR 12P			
		< DIODE >			
D901	8-719-977-00	DIODE	DTZ5.1C		
D902	8-719-056-83	DIODE	UDZ-TE-17-6.8B		
D903	8-719-056-83	DIODE	UDZ-TE-17-6.8B		
D904	8-719-056-83	DIODE	UDZ-TE-17-6.8B		
D905	8-719-056-83	DIODE	UDZ-TE-17-6.8B		
		< IC >			
IC901	8-759-330-60	IC	LC75822WD		
		< LIQUID CRYSTAL DISPLAY >			
LCD901	1-801-161-11	DISPLAY PANEL, LIQUID CRYSTAL			
		< SWITCH >			
LSW911	1-762-141-12	SWITCH, KEY BOARD (WITH LED)			(OFF) (AMBER)
LSW911	1-762-142-12	SWITCH, KEY BOARD (WITH LED)			(OFF) (GREEN)
LSW911	1-762-635-11	SWITCH, KEY BOARD (WITH LED)			(OFF) (RED)
LSW912	1-762-141-12	SWITCH, KEY BOARD (WITH LED)			(TUNER) (AMBER)
LSW912	1-762-142-12	SWITCH, KEY BOARD (WITH LED)			(TUNER) (GREEN)
LSW912	1-762-635-11	SWITCH, KEY BOARD (WITH LED)			(TUNER) (RED)
LSW913	1-762-141-12	SWITCH, KEY BOARD (WITH LED)			(CD) (AMBER)
LSW913	1-762-142-12	SWITCH, KEY BOARD (WITH LED)			(CD) (GREEN)
LSW913	1-762-635-11	SWITCH, KEY BOARD (WITH LED)			(CD) (RED)
LSW914	1-762-141-12	SWITCH, KEY BOARD (WITH LED)			(BTM) (AMBER)
LSW914	1-762-142-12	SWITCH, KEY BOARD (WITH LED)			(BTM) (GREEN)
LSW914	1-762-635-11	SWITCH, KEY BOARD (WITH LED)			(BTM) (RED)
LSW915	1-762-141-12	SWITCH, KEY BOARD (WITH LED)			(LCL) (AMBER)
LSW915	1-762-142-12	SWITCH, KEY BOARD (WITH LED)			(LCL) (GREEN)
LSW915	1-762-635-11	SWITCH, KEY BOARD (WITH LED)			(LCL) (RED)
LSW916	1-762-141-12	SWITCH, KEY BOARD (WITH LED)			(MONO) (AMBER)
LSW916	1-762-142-12	SWITCH, KEY BOARD (WITH LED)			(MONO) (GREEN)
LSW916	1-762-635-11	SWITCH, KEY BOARD (WITH LED)			(MONO) (RED)
LSW917	1-762-141-12	SWITCH, KEY BOARD (WITH LED)			(DSPL) (AMBER)
LSW917	1-762-142-12	SWITCH, KEY BOARD (WITH LED)			(DSPL) (GREEN)
LSW917	1-762-635-11	SWITCH, KEY BOARD (WITH LED)			(DSPL) (RED)
LSW918	1-762-141-12	SWITCH, KEY BOARD (WITH LED)			(-) (AMBER)
LSW918	1-762-142-12	SWITCH, KEY BOARD (WITH LED)			(-) (GREEN)
LSW918	1-762-635-11	SWITCH, KEY BOARD (WITH LED)			(-) (RED)
LSW919	1-762-141-12	SWITCH, KEY BOARD (WITH LED)			(SEL) (AMBER)
LSW919	1-762-142-12	SWITCH, KEY BOARD (WITH LED)			(SEL) (GREEN)
LSW919	1-762-635-11	SWITCH, KEY BOARD (WITH LED)			(SEL) (RED)
LSW920	1-762-141-12	SWITCH, KEY BOARD (WITH LED)			(+) (AMBER)
LSW920	1-762-142-12	SWITCH, KEY BOARD (WITH LED)			(+) (GREEN)
LSW920	1-762-635-11	SWITCH, KEY BOARD (WITH LED)			(+) (RED)
LSW921	1-762-141-12	SWITCH, KEY BOARD (WITH LED)			(LOUD) (AMBER)

Ref. No.	Part No.	Description	Remark
LSW921	1-762-142-12	SWITCH, KEY BOARD (WITH LED)	(LOUD) (GREEN)
LSW921	1-762-635-11	SWITCH, KEY BOARD (WITH LED)	(LOUD) (RED)
LSW922	1-762-141-12	SWITCH, KEY BOARD (WITH LED)	(MUTE) (AMBER)
LSW922	1-762-142-12	SWITCH, KEY BOARD (WITH LED)	(MUTE) (GREEN)
LSW922	1-762-635-11	SWITCH, KEY BOARD (WITH LED)	(MUTE) (RED)
LSW923	1-762-141-12	SWITCH, KEY BOARD (WITH LED)	(⏏) (AMBER)
LSW923	1-762-142-12	SWITCH, KEY BOARD (WITH LED)	(⏏) (GREEN)
LSW923	1-762-635-11	SWITCH, KEY BOARD (WITH LED)	(⏏) (RED)
LSW924	1-762-141-12	SWITCH, KEY BOARD (WITH LED)	(TAPE ◀❚▶) (AMBER)
LSW924	1-762-142-12	SWITCH, KEY BOARD (WITH LED)	(TAPE ◀❚▶) (GREEN)
LSW924	1-762-635-11	SWITCH, KEY BOARD (WITH LED)	(TAPE ◀❚▶) (RED)
LSW925	1-762-141-12	SWITCH, KEY BOARD (WITH LED)	(PRESET -, DISC REW) (AMBER)
LSW925	1-762-142-12	SWITCH, KEY BOARD (WITH LED)	(PRESET -, DISC REW) (GREEN)
LSW925	1-762-635-11	SWITCH, KEY BOARD (WITH LED)	(PRESET -, DISC REW) (RED)
LSW926	1-762-141-12	SWITCH, KEY BOARD (WITH LED)	(PRESET +, DISC FF) (AMBER)
LSW926	1-762-142-12	SWITCH, KEY BOARD (WITH LED)	(PRESET +, DISC FF) (GREEN)
LSW926	1-762-635-11	SWITCH, KEY BOARD (WITH LED)	(PRESET +, DISC FF) (RED)
LSW927	1-762-141-12	SWITCH, KEY BOARD (WITH LED)	(SEEK +, AMS ▶▶❙) (AMBER)
LSW927	1-762-142-12	SWITCH, KEY BOARD (WITH LED)	(SEEK +, AMS ▶▶❙) (GREEN)
LSW927	1-762-635-11	SWITCH, KEY BOARD (WITH LED)	(SEEK +, AMS ▶▶❙) (RED)
LSW928	1-762-141-12	SWITCH, KEY BOARD (WITH LED)	(SEEK -, AMS ❙◀◀) (AMBER)
LSW928	1-762-142-12	SWITCH, KEY BOARD (WITH LED)	(SEEK -, AMS ❙◀◀) (GREEN)
LSW928	1-762-635-11	SWITCH, KEY BOARD (WITH LED)	(SEEK -, AMS ❙◀◀) (RED)
LSW929	1-762-141-12	SWITCH, KEY BOARD (WITH LED)	(6 BL. SKIP) (AMBER)
LSW929	1-762-142-12	SWITCH, KEY BOARD (WITH LED)	(6 BL. SKIP) (GREEN)
LSW929	1-762-635-11	SWITCH, KEY BOARD (WITH LED)	(6 BL. SKIP) (RED)
LSW930	1-762-141-12	SWITCH, KEY BOARD (WITH LED)	(5 ATA) (AMBER)
LSW930	1-762-142-12	SWITCH, KEY BOARD (WITH LED)	(5 ATA) (GREEN)
LSW930	1-762-635-11	SWITCH, KEY BOARD (WITH LED)	(5 ATA) (RED)
LSW931	1-762-141-12	SWITCH, KEY BOARD (WITH LED)	(4) (AMBER)
LSW931	1-762-142-12	SWITCH, KEY BOARD (WITH LED)	(4) (GREEN)
LSW931	1-762-635-11	SWITCH, KEY BOARD (WITH LED)	(4) (RED)
LSW932	1-762-141-12	SWITCH, KEY BOARD (WITH LED)	(1 INTRO) (AMBER)
LSW932	1-762-142-12	SWITCH, KEY BOARD (WITH LED)	(1 INTRO) (GREEN)
LSW932	1-762-635-11	SWITCH, KEY BOARD (WITH LED)	(1 INTRO) (RED)
LSW933	1-762-141-12	SWITCH, KEY BOARD (WITH LED)	(2 REP) (AMBER)
LSW933	1-762-142-12	SWITCH, KEY BOARD (WITH LED)	(2 REP) (GREEN)
LSW933	1-762-635-11	SWITCH, KEY BOARD (WITH LED)	(2 REP) (RED)
LSW934	1-762-141-12	SWITCH, KEY BOARD (WITH LED)	(3 SHUF) (AMBER)
LSW934	1-762-142-12	SWITCH, KEY BOARD (WITH LED)	(3 SHUF) (GREEN)
LSW934	1-762-635-11	SWITCH, KEY BOARD (WITH LED)	(3 SHUF) (RED)

< PILOT LAMP >

PL901	1-517-397-11	LAMP, PILOT	(RED)
PL901	1-517-406-21	LAMP, PILOT	(AMBER)
PL901	1-517-407-21	LAMP, PILOT	(GREEN)
PL902	1-517-397-11	LAMP, PILOT	(RED)
PL902	1-517-406-21	LAMP, PILOT	(AMBER)
PL902	1-517-407-21	LAMP, PILOT	(GREEN)

< RESISTOR >

R901	1-216-093-00	METAL CHIP	68K	5%	1/10W
R902	1-216-041-00	METAL CHIP	470	5%	1/10W
R903-906	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R911-913	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R914	1-208-437-41	METAL GLAZE	1K	2%	1/10W
R915	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R916	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R917	1-208-445-41	METAL GLAZE	2.2K	2%	1/10W
R918	1-208-449-41	METAL GLAZE	3.3K	2%	1/10W
R919	1-208-453-41	METAL GLAZE	4.7K	2%	1/10W
R920	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R921	1-208-462-41	METAL GLAZE	10K	2%	1/10W
R922	1-208-810-11	METAL GLAZE	15K	2%	1/10W

KEY **MAIN**

Ref. No.	Part No.	Description			Remark
R923-925					
	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R926	1-208-437-41	METAL GLAZE	1K	2%	1/10W
R927	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R928	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R929	1-208-445-41	METAL GLAZE	2.2K	2%	1/10W
R930	1-208-449-41	METAL GLAZE	3.3K	2%	1/10W
R931	1-208-453-41	METAL GLAZE	4.7K	2%	1/10W
R932	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R933	1-208-462-41	METAL GLAZE	10K	2%	1/10W
R940	1-216-025-00	METAL GLAZE	100	5%	1/10W (GREEN)
R940	1-216-029-00	METAL CHIP	150	5%	1/10W (RED, AMBER)
R941	1-216-025-00	METAL GLAZE	100	5%	1/10W (GREEN)
R941	1-216-029-00	METAL CHIP	150	5%	1/10W (RED, AMBER)
R942	1-216-025-00	METAL GLAZE	100	5%	1/10W (GREEN)
R942	1-216-029-00	METAL CHIP	150	5%	1/10W (RED, AMBER)
R943	1-216-025-00	METAL GLAZE	100	5%	1/10W (GREEN)
R943	1-216-029-00	METAL CHIP	150	5%	1/10W (RED, AMBER)
R944	1-216-025-00	METAL GLAZE	100	5%	1/10W (GREEN)
R944	1-216-029-00	METAL CHIP	150	5%	1/10W (RED, AMBER)
R945	1-216-025-00	METAL GLAZE	100	5%	1/10W (GREEN)
R945	1-216-029-00	METAL CHIP	150	5%	1/10W (RED, AMBER)

****

* A-3309-061-A MAIN BOARD, COMPLETE (C220:AMBER)
* A-3309-064-A MAIN BOARD, COMPLETE (C220:GREEN)
* A-3309-069-A MAIN BOARD, COMPLETE (6559:RED)
* A-3309-072-A MAIN BOARD, COMPLETE (6559:GREEN)

****

< CAPACITOR >

C1	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C2	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C3-5					
	1-124-584-00	ELECT	100uF	20%	10V
C6	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C7	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C9	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C10	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C12-15					
	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C16	1-124-589-11	ELECT	47uF	20%	16V
C17	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C18	1-136-169-00	FILM	0.22uF	5%	50V
C19	1-137-368-11	FILM	0.0047uF	5%	50V

Ref. No.	Part No.	Description			Remark
C20	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V (6559)
C20	1-216-295-00	CONDUCTOR, CHIP		(2012)	(C220)
C21	1-126-096-11	ELECT	10uF	20%	35V (6559)
C22	1-164-232-11	CERAMIC CHIP	0.01uF		50V (6559)
C24	1-163-205-00	CERAMIC CHIP	0.001uF	5%	50V
C25	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C101	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C103	1-124-257-00	ELECT	2.2uF	20%	50V
C104	1-126-157-11	ELECT	10uF	20%	16V
C105	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C106	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C107	1-126-157-11	ELECT	10uF	20%	16V
C108	1-163-014-00	CERAMIC CHIP	0.0027uF	10%	50V
C109	1-126-157-11	ELECT	10uF	20%	16V
C110	1-136-169-00	FILM	0.22uF	5%	50V
C111	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C112	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C113	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C116	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C117	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C118	1-163-251-11	CERAMIC CHIP	100PF	5%	50V (C220)
C119	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C120	1-126-157-11	ELECT	10uF	20%	16V
C151	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C152	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C153	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C161	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C162	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C163	1-124-584-00	ELECT	100uF	20%	10V
C164	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C165	1-124-234-00	ELECT	22uF	20%	16V
C166	1-163-205-00	CERAMIC CHIP	0.001uF	5%	50V
C201	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C203	1-124-257-00	ELECT	2.2uF	20%	50V
C204	1-126-157-11	ELECT	10uF	20%	16V
C205	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C206	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C207	1-126-157-11	ELECT	10uF	20%	16V
C208	1-163-014-00	CERAMIC CHIP	0.0027uF	10%	50V
C209	1-126-157-11	ELECT	10uF	20%	16V
C210	1-136-169-00	FILM	0.22uF	5%	50V
C211	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C212	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C213	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C216	1-163-251-11	CERAMIC CHIP	100PF	5%	50V

Ref. No.	Part No.	Description			Remark
C217	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C218	1-163-251-11	CERAMIC CHIP	100PF	5%	50V (C220)
C219	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C220	1-126-157-11	ELECT	10uF	20%	16V
C302	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C303	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C304	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C305	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C306	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C307	1-126-163-11	ELECT	4.7uF	20%	50V
C351	1-124-234-00	ELECT	22uF	20%	16V
C352	1-124-584-00	ELECT	100uF	20%	10V
C353	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C354	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C355	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C356	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C361	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C362	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C363	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C364	1-126-157-11	ELECT	10uF	20%	16V
C365	1-124-234-00	ELECT	22uF	20%	16V
C366	1-124-120-11	ELECT	220uF	20%	25V
C402	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C403	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C404	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C405	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C406	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C407	1-126-163-11	ELECT	4.7uF	20%	50V
C501	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C502	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C503	1-124-257-00	ELECT	2.2uF	20%	50V
C504	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C505	1-124-589-11	ELECT	47uF	20%	16V
C506	1-124-257-00	ELECT	2.2uF	20%	50V
C507	1-164-346-11	CERAMIC CHIP	1uF		16V
C509	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C510	1-125-705-11	CAPACITOR	0.22F		5.5V
C511	1-124-584-00	ELECT	100uF	20%	10V
C512	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C513	1-109-982-11	CERAMIC CHIP	1uF	10%	10V (RED)
C515	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C517	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C601	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C602	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C603	1-126-157-11	ELECT	10uF	20%	16V
C604	1-124-234-00	ELECT	22uF	20%	16V
C605	1-126-096-11	ELECT	10uF	20%	35V
C606	1-124-589-11	ELECT	47uF	20%	16V
C607	1-124-589-11	ELECT	47uF	20%	16V
C608	1-126-157-11	ELECT	10uF	20%	16V
C609	1-126-936-11	ELECT	3300uF	20%	16V
C610	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C611	1-163-181-00	CERAMIC CHIP	100PF	5%	50V
C613	1-136-165-00	FILM	0.1uF	5%	50V
C614	1-124-234-00	ELECT	22uF	20%	16V
C701	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C702	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C703	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C704	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C705	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
		< JACK >			
CN150	1-774-699-11	JACK, PIN 4P (LINE OUT/BUS AUDIO IN)			(C220)
CN150	1-774-811-11	JACK, PIN 2P (BUS AUDIO IN) (6559)			
		< CONNECTOR >			
CN351	1-766-260-11	CONNECTOR, FFC/FPC (ZIF) 7P			
* CN352	1-506-995-11	PIN, CONNECTOR (PC BOARD) 13P			
CN601	1-774-701-11	PIN, CONNECTOR 16P			
CN602	1-764-422-11	PLUG, CONNECTOR 12P			
CN701	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)			
		< DISCHARGE GAP >			
CP1	1-519-504-11	GAP, DISCHARGE			
		< DIODE >			
D1	8-719-991-65	DIODE	SB02W03C		
D2	8-719-010-34	DIODE	UZ-4.7BSC		
D3	8-719-110-17	DIODE	RD10ESB2		
D4	8-719-988-62	DIODE	1SS355 (6559)		
D351	8-719-988-62	DIODE	1SS355		
D361	8-719-977-22	DIODE	DTZ9.1		
D362	8-719-911-19	DIODE	1SS119		
D501	8-719-988-62	DIODE	1SS355		
D502	8-719-988-62	DIODE	1SS355		
D503	8-719-988-62	DIODE	1SS355		
D504	8-719-988-62	DIODE	1SS355		
D505	8-719-977-22	DIODE	DTZ9.1		
D506	8-719-976-99	DIODE	DTZ5.1B (RED)		
D507	8-719-056-83	DIODE	UDZ-TE-17-6.8B		
D508	8-719-056-83	DIODE	UDZ-TE-17-6.8B		
D509	8-719-056-83	DIODE	UDZ-TE-17-6.8B		
D510	8-719-109-97	DIODE	RD6.8ES-B2		
D511	8-719-109-97	DIODE	RD6.8ES-B2		
D512	8-719-923-93	DIODE	MTZJ-T-77-16C		

MAIN

Ref. No.	Part No.	Description	Remark
D513	8-719-109-97	DIODE RD6.8ES-B2	
D514	8-719-109-97	DIODE RD6.8ES-B2	
D515	8-719-109-97	DIODE RD6.8ES-B2	
D516	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D519	8-719-911-19	DIODE 1SS119	
D520	8-719-988-62	DIODE 1SS355	
D521	8-719-914-43	DIODE DAN202K	
D522	8-719-977-17	DIODE DTZ7.5C	
D523	8-719-976-88	DIODE DTZ3.9B	
D524	8-719-988-62	DIODE 1SS355 (RED)	
D601	8-719-978-50	DIODE DTZ-TT11-10C	
D602	8-719-200-02	DIODE 10E2	
D603	8-719-200-02	DIODE 10E2	
D604	8-719-049-38	DIODE 1N5404TU	
D605	8-719-200-02	DIODE 10E2	
D701	8-719-923-93	DIODE MTZJ-T-77-16C	
D702	8-719-105-99	DIODE RD6.2M-B1	
D703	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D704	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D705	8-719-056-83	DIODE UDZ-TE-17-6.8B	
		< FUSE >	
F801	1-533-331-11	FUSE (BLADE TYPE) (AUTO FUSE) 15A	
		< IC >	
IC151	8-752-075-48	IC CXA1946AQ-T6	
IC152	8-759-909-71	IC BA4558F	
IC351	8-752-076-05	IC CXA2509Q-T4	
IC361	8-759-823-87	IC LB1638M	
IC501	8-759-398-39	IC uPD17708GC-523-3B9	
IC502	8-759-097-36	IC RH5VA40AA	
IC601	8-759-369-42	IC HA13153	
IC602	8-759-347-49	IC BA3918-V2	
IC701	8-759-096-16	IC MM1175XF-T1	
		< JACK >	
J1	1-770-279-12	JACK, ANTENNA (ISO) (ANTENNA)	
J501	1-566-822-11	JACK (REMOTE IN)	
		< JUMPER RESISTOR >	
JC1	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC2	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC4-12			
	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC13	1-216-296-00	CONDUCTOR, CHIP (3216)	
JC14	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC15	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC17	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC18	1-216-295-00	CONDUCTOR, CHIP (2012)	
JC51-67			
	1-216-296-00	CONDUCTOR, CHIP (3216)	
		< COIL >	
L1	1-414-137-31	INDUCTOR 0.22uH (6559)	
L2	1-410-065-11	INDUCTOR 3.3mH (6559)	
L501	1-410-971-11	INDUCTOR 10uH	
L601	1-411-669-12	COIL, CHOKE	
		< TERMINAL BOARD >	
* LUG1-3			
	1-537-770-11	TERMINAL BOARD, GROUND	
		< TRANSISTOR >	
Q2	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q4	8-729-021-94	TRANSISTOR 2SK1657-T1B	
Q6	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q101	8-729-920-21	TRANSISTOR DTC314TKH04	
Q102	8-729-920-21	TRANSISTOR DTC314TKH04	
Q201	8-729-920-21	TRANSISTOR DTC314TKH04	
Q202	8-729-920-21	TRANSISTOR DTC314TKH04	
Q361	8-729-921-48	TRANSISTOR 2SD1760F5-TRPQR	
Q362	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q363	8-729-900-53	TRANSISTOR DTC114EK	
Q364	8-729-106-60	TRANSISTOR 2SB1115A	
Q365	8-729-900-53	TRANSISTOR DTC114EK	
Q451	8-729-903-10	TRANSISTOR FMW1	
Q501	8-729-921-25	TRANSISTOR FMC2	
Q502	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q504	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q601	8-729-030-18	TRANSISTOR 2SD2525	
Q602	8-729-030-18	TRANSISTOR 2SD2525	
Q603	8-729-921-25	TRANSISTOR FMC2	
Q701	8-729-900-53	TRANSISTOR DTC114EK	
		< RESISTOR >	
R1-3			
	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
R5	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R6	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R7	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R8	1-216-242-00	METAL GLAZE 68K 5% 1/8W	
R9	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R10	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
R11	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R12	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R13	1-247-747-11	CARBON 470 5% 1/2W (6559)	
R14	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R15	1-249-407-11	CARBON 150 5% 1/4W	

MAIN

Ref. No.	Part No.	Description			Remark
R16	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R101	1-216-073-00	METAL CHIP	10K	5%	1/10W
R102	1-216-073-00	METAL CHIP	10K	5%	1/10W
R103	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R104	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R105	1-216-073-00	METAL CHIP	10K	5%	1/10W
R106	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R107	1-216-081-00	METAL CHIP	22K	5%	1/10W
R108	1-216-085-00	METAL CHIP	33K	5%	1/10W
R109	1-216-017-00	METAL GLAZE	47	5%	1/10W
R110	1-216-017-00	METAL GLAZE	47	5%	1/10W
R113	1-216-073-00	METAL CHIP	10K	5%	1/10W
R114	1-216-073-00	METAL CHIP	10K	5%	1/10W
R115	1-216-081-00	METAL CHIP	22K	5%	1/10W
R116	1-216-081-00	METAL CHIP	22K	5%	1/10W
R117	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R118	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R119	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R120	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R151	1-216-073-00	METAL CHIP	10K	5%	1/10W
R152	1-216-073-00	METAL CHIP	10K	5%	1/10W
R161	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R162	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R201	1-216-073-00	METAL CHIP	10K	5%	1/10W
R202	1-216-073-00	METAL CHIP	10K	5%	1/10W
R203	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R204	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R205	1-216-073-00	METAL CHIP	10K	5%	1/10W
R206	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R207	1-216-081-00	METAL CHIP	22K	5%	1/10W
R208	1-216-085-00	METAL CHIP	33K	5%	1/10W
R209	1-216-017-00	METAL GLAZE	47	5%	1/10W
R210	1-216-017-00	METAL GLAZE	47	5%	1/10W
R213	1-216-073-00	METAL CHIP	10K	5%	1/10W
R214	1-216-073-00	METAL CHIP	10K	5%	1/10W
R215	1-216-081-00	METAL CHIP	22K	5%	1/10W
R216	1-216-081-00	METAL CHIP	22K	5%	1/10W
R217	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R218	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R219	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R220	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R301	1-216-109-00	METAL CHIP	330K	5%	1/10W
R302	1-216-109-00	METAL CHIP	330K	5%	1/10W
R303	1-216-041-00	METAL CHIP	470	5%	1/10W
R304	1-216-109-00	METAL CHIP	330K	5%	1/10W
R305	1-216-076-00	METAL CHIP	13K	5%	1/10W
R306	1-216-079-00	METAL CHIP	18K	5%	1/10W
R307	1-216-073-00	METAL CHIP	10K	5%	1/10W
R308	1-216-081-00	METAL CHIP	22K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R351	1-216-079-00	METAL CHIP	18K	5%	1/10W
R352	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R353	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R354	1-216-077-00	METAL CHIP	15K	5%	1/10W
R355	1-216-073-00	METAL CHIP	10K	5%	1/10W
R356	1-216-073-00	METAL CHIP	10K	5%	1/10W
R358	1-216-073-00	METAL CHIP	10K	5%	1/10W
R359	1-216-109-00	METAL CHIP	330K	5%	1/10W
R360	1-247-791-00	CARBON	22	5%	1/4W
R361	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R362	1-249-389-11	CARBON	4.7	5%	1/4W
R363	1-249-389-11	CARBON	4.7	5%	1/4W
R364	1-216-073-00	METAL CHIP	10K	5%	1/10W
R365	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R401	1-216-109-00	METAL CHIP	330K	5%	1/10W
R402	1-216-109-00	METAL CHIP	330K	5%	1/10W
R403	1-216-041-00	METAL CHIP	470	5%	1/10W
R404	1-216-109-00	METAL CHIP	330K	5%	1/10W
R405	1-216-076-00	METAL CHIP	13K	5%	1/10W
R406	1-216-079-00	METAL CHIP	18K	5%	1/10W
R407	1-216-073-00	METAL CHIP	10K	5%	1/10W
R408	1-216-081-00	METAL CHIP	22K	5%	1/10W
R451	1-216-025-00	METAL GLAZE	100	5%	1/10W
R452	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R453	1-216-246-00	METAL GLAZE	100K	5%	1/8W
R501	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R502	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R505	1-216-085-00	METAL CHIP	33K	5%	1/10W
R506	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R508	1-216-073-00	METAL CHIP	10K	5%	1/10W
R509	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R510	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R511	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R512	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R513	1-216-206-00	METAL GLAZE	2.2K	5%	1/8W
R514	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R515-523					
	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R525	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R526	1-216-097-00	METAL GLAZE	100K	5%	1/10W (GREEN)
R527	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R528-530					
	1-216-246-00	METAL GLAZE	100K	5%	1/8W
R531	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R533	1-216-246-00	METAL GLAZE	100K	5%	1/8W
R534	8-719-988-62	DIODE 1SS355			
R535	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R536	1-216-097-00	METAL GLAZE	100K	5%	1/10W

MAIN

Ref. No.	Part No.	Description			Remark
R537	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R538	1-216-017-00	METAL GLAZE	47	5%	1/10W
R539	1-216-073-00	METAL CHIP	10K	5%	1/10W
R540	1-216-049-11	METAL CHIP	1K	5%	1/10W (RED)
R542	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W (RED)
R543	1-216-025-00	METAL GLAZE	100	5%	1/10W
R544	1-216-025-00	METAL GLAZE	100	5%	1/10W
R545	1-216-198-00	METAL GLAZE	1K	5%	1/8W
R546	1-208-806-11	METAL CHIP	10K	0.50%	1/10W
R547	1-208-806-11	METAL CHIP	10K	0.50%	1/10W
R548	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R549	1-216-073-00	METAL CHIP	10K	5%	1/10W
R550	1-208-806-11	METAL CHIP	10K	0.50%	1/10W
R551	1-216-174-00	METAL GLAZE	100	5%	1/8W
R552	1-216-174-00	METAL GLAZE	100	5%	1/8W
R553	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R554	1-216-073-00	METAL CHIP	10K	5%	1/10W
R555	1-216-206-00	METAL GLAZE	2.2K	5%	1/8W
R556-558	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R559	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R560	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R561	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R562	1-216-206-00	METAL GLAZE	2.2K	5%	1/8W
R563	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R568	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R569	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R570	1-216-097-00	METAL GLAZE	100K	5%	1/10W (RED, AMBER)
R571	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R572	1-216-246-00	METAL GLAZE	100K	5%	1/8W
R601	1-249-385-11	CARBON	2.2	5%	1/6W
R602	1-249-385-11	CARBON	2.2	5%	1/6W
R603	1-216-037-00	METAL CHIP	330	5%	1/10W
R701	1-216-295-00	CONDUCTOR, CHIP		(2012)	
R702	1-216-017-00	METAL GLAZE	47	5%	1/10W
R703	1-216-073-00	METAL CHIP	10K	5%	1/10W
R704	1-216-025-00	METAL GLAZE	100	5%	1/10W
R705	1-216-174-00	METAL GLAZE	100	5%	1/8W
R706	1-216-246-00	METAL GLAZE	100K	5%	1/8W

< SWITCH >

S501	1-571-478-11	SWITCH, SLIDE (POWER SELECT) (C220)
S503	1-571-532-21	SWITCH, TACTIL (RESET)

< TUNER >

TU1	A-3282-012-A	TUNER UNIT (TUX-006)

Ref. No.	Part No.	Description	Remark
		< VIBRATOR >	
X501	1-578-785-11	VIBRATOR, CRYSTAL (4.5MHz)	

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MISCELLANEOUS

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10	1-776-527-11	CORD (WITH CONNECTOR) (ISO) (C220)	
13	1-776-208-11	CORD (WITH CONNECTOR) (VAG-UK) (6559:RED)	
13	1-776-208-21	CORD (WITH CONNECTOR) (VAG-UK) (6559:GREEN)	
130	1-765-460-12	CORD (WITH CONNECTOR)	
F801	1-533-331-11	FUSE (BLADE TYPE) (AUTO FUSE) 15A	
HP901	1-500-196-21	HEAD, MAGNETIC (PLAYBACK)	
M901	X-3368-684-1	MOTOR ASSY, MAIN (CAPSTAN/REEL)	
M902	X-3368-685-1	MOTOR ASSY, SUB (LOADING/TAPE OPERATION)	
S901	1-692-885-11	SWITCH, ROTARY SLIDE (TAPE OPERATION)	

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ACCESSORIES & PACKING MATERIALS

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	3-810-235-11	MANUAL, INSTRUCTION (FRENCH, GERMAN, DUTCH, ITALIAN) (IT, G)
	3-810-235-21	MANUAL, INSTRUCTION (ENGLISH, SPANISH, SWEDISH, PORTUGUESE) (C220:AEP, UK)
	3-810-236-11	MANUAL, INSTRUCTION, INSTALL (FRENCH, GERMAN, DUTCH, ITALIAN) (IT, G)
	3-810-236-21	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, SWEDISH, PORTUGUESE) (C220:AEP, UK)
	3-810-238-11	MANUAL, INSTRUCTION (ENGLISH) (6559)
	X-3367-795-1	CASE ASSY

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HARDWARE LIST

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#1	7-621-770-67	SCREW +PTT 2.6X6 (S)
#2	7-621-770-XX	SCREW +PTT 2.6X8 (S)
#3	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT
#4	7-627-553-17	PRECISION SCREW +P 2X2 TYPE 3
#5	7-628-253-00	SCREW +PS 2X4
#6	7-624-104-04	STOP RING 2.0, TYPE -E
#7	7-621-772-10	SCREW +B 2X4
#8	7-621-773-95	SCREW +PTT 2.6X6 (S)

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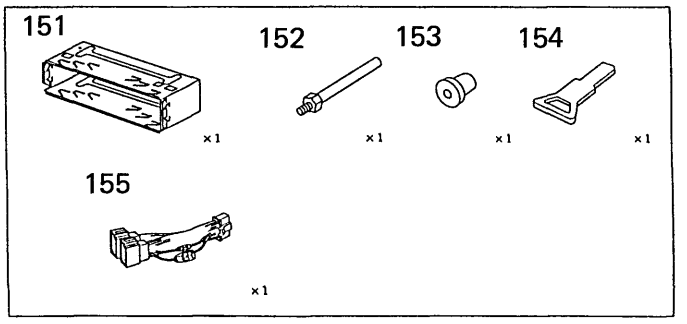
Ref. No.	Part No.	Description	Remark
		MOUNTING HARDWARE	
		**********	
151	X-3366-235-1	FRAME ASSY, FITTING (IT, G)	
151	X-3371-638-1	FRAME ASSY (B), FITTING (AEP, UK)	
152	3-386-828-01	SCREW, FITTING	
* 153	3-358-697-01	BUSHING	
154	3-909-731-01	KEY (C220)	
155	1-776-208-11	CORD (WITH CONNECTOR) (VAG-UK)	(6559:RED)
155	1-776-208-21	CORD (WITH CONNECTOR) (VAG-UK)	(6559:GREEN)
155	1-776-527-11	CORD (WITH CONNECTOR) (ISO) (C220)	



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